

OBSERVATIONS

(3)

ON THE

MEDICAL TREATMENT

OF

INSANITY.

BY

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THE following Remarks contain the substance of the Croonian Lectures which the Author had the honour of delivering before the College of Physicians in May 1831. In preparing them, he consulted the works of many eminent Continental writers; but to none of these has he been more indebted than to the learned Treatise of Dr. Guislain, of Ghent, on Maniacal Diseases.

TO

SIR HENRY HALFORD, BART.

THE PRESIDENT,

THE FELLOWS AND LICENTIATES OF THE ROYAL
COLLEGE OF PHYSICIANS, LONDON ;

THE FOLLOWING PAGES ARE INSCRIBED, WITH THE
GREATEST RESPECT,

BY THEIR OBEDIENT SERVANT,

THE AUTHOR.

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INSANITY.

THE learned physician who delivered the Croonian lectures during the last two years, entered very fully into the investigation of those diseases of the brain which arise from, or are attended with, alterations of structure; and traced with great accuracy and clearness the changes which the improved observations of modern times have detected in this viscus. Difficult as such a task undoubtedly was, it falls short of that which my sense of duty has imposed upon myself—the continuation of investigation of diseases of the sensorium arising from the disturbance of its intellectual perceptions, either actually commencing in the brain itself, or, secondarily, from the extraordinary sympathy of that organ with viscera in the other cavities of the body. With such an object, it is needless for me to claim indulgence; the extreme

difficulty of the inquiry, and the darkness in which it is enveloped, must be felt by all. Unfortunately, likewise, the difficulties are greatly increased by this department of science having been left almost exclusively, in this country, to medical men who resign the care of other diseases, and, with few and eminent exceptions, lose the power of investigating the aberrations of intellect in conjunction with the other functional diseases of the human frame. It is my anxious wish to place before the College an outline of the labours of others ; and, in these and the succeeding lectures, to analyse what has been recommended with a view to simplify our knowledge of causes, and to determine upon what cases are, and what cases are not, remediable in the present state of the medical art. The hopeless nature of many cases of insanity, the severity of others, and perhaps the necessity for seclusion, have induced physicians very generally to resign all hopes of applying, successfully, means of cure, which may be said, in other diseases, to give all but life itself.

These feelings have been strengthened by the unhappy prevalence of insanity in several members of the same family. This predisposition disheartens the physician ; he is hopeless that the disorder of the intellect should have arisen without any change of structure from sympathy with

other diseases of the body. He approaches the subject with awe, rather than with a spirit of inquiry, and consigns, in despair, the patient to a living tomb.

Still, under judicious care and treatment, persons recover even from the most extreme instances of aberration, and in no mean proportion; in fact, in a proportion which ought to stimulate physicians, so far from abandoning their patients, to use every resource resulting from their observation, and derived from their art. To exemplify my meaning, I may take the cures in Mr. Warburton's establishment, the White House on Bethnal Green; a house where the arrangement, order, and attention, are highly deserving of praise, and which contains 400 lunatics, comprising persons in every stage and variety of this afflicting malady. It is to be observed that many of these cases are paupers, received after a probationary sojourn in the parish infirmary, and not unfrequently dismissed uncured, after the year's trial, from Bethlehem or St. Luke's. In the year 1829, of two hundred persons admitted into the White-House, fifty were discharged cured in the course of the same year; and, creditable as such a fact is to the establishment, it is still more important to medical men, as one which may rouse them to use all their

energies in the treatment of a disease which may and can be cured.

Do we see the extreme of this disease,—the patient raving, unconscious to the calls of nature, or, if conscious, only indulging in habits abhorrent even to the brute creation—deprived not only of the mind of an immortal being, but even of that instinct which supplies its place among the lower animals,—yet such cases are curable. The following instance is related by Mr. Finch, a medical man, and the proprietor of a house for lunatics, at Laverstock, near Salisbury, in his evidence before the Committee of the House of Commons, in 1816 :—“ I can give you (says Mr. Finch) a very strong case of a patient I had from St. Luke’s : he was a man of opulence, sent there as a pauper ; he came to me afterwards as a gentleman. This man came to me a most miserable object from St. Luke’s, after having been there a twelvemonth, and discharged as incurable : he was so bad that he had lost nearly the use of his limbs : he walked upon his toes ; he could scarcely get from the coach to my house ; the muscles of his legs were contracted ; he was so nasty in himself that he ate his own fæces, and would his own flesh, if he had not been prevented ; he tore it immediately, as he came to me. I had to put him into a room

where he could do no mischief to himself or any one else, but took off every restraint: I found him within a few days more composed. Some little time afterwards he became so bad again, that I was obliged to use some restraint, so as to prevent his eating his own fæces. From having a man attending him two or three times every day to the privy, his disposition to filth was lessened; by attending to his bowels, and keeping him strongly exercised in the gardens and fields, I found him gaining strength daily; within six weeks, capable of playing at bowls; and I sent him home perfectly restored in four months, where he carried on the business of a coach-proprietor for three years afterwards."

I am happy to avail myself here of the testimony of the most experienced practical physician of our country.

Sir H. Halford says, in his evidence before the House of Commons, in 1816:—

" If medicine be less useful in the confirmed periods of insanity, it is as little so in the advanced stages of other chronic diseases. In cases of incapacity of the joints, with painful swellings upon them, from chalk stones, after repeated fits of the gout, medicine has no effect upon these depositions; yet this is no argument

against the use of medicine in the first attacks of gout, to prevent such dismemberment and deformity. Again, in the instance of palsy, when a patient has lost the half of his body; in this stage of the complaint medicine has very little sensible effect upon it; but, if the patient be assisted in the earliest attack of the malady, whilst under apoplexy, which generally precedes palsy, not only may his life possibly be saved, but the paralytic symptoms prevented altogether, or, at least, considerably mitigated. But we have much to learn on the subject of mental derangement; and I am of opinion, that our knowledge of insanity has not kept pace with our knowledge of other distempers, from the habit we find established, of transferring patients under this malady, as soon as it has declared itself, to the care of persons who too frequently limit their attention to the mere personal security of their patients, without attempting to assist them by the resources of medicine. We find facts in the history of this disease, and if they are carefully recorded under the observation of enlightened physicians, no doubt they will sooner or later be collected in sufficient number to admit of safe and useful inductions."

Nor is time always conclusive: solitary instances of cure have occurred after uninterrupted insanity of ten years. But it may be said, and

often has been said, that the young and inexperienced in our profession alone believe in the efficacy of medical treatment to cure mental derangement: a little experience would convince them that such disorders are altogether incurable: and it is not unfrequent to hear any hint at treatment met by the observation—"It is quite useless: all these cases arise from organic disease; and does any man pretend to cure organic disease of the brain?" All the powerful agents which we possess to diminish excitement, soothe and allay irritability, reduce temporarily increased sensibility, or relax inordinate muscular power, in other diseases, are to be abandoned here, from a consciousness of the difficulty of permanent cure.

Long since, the division of those cases of insanity which spring from physical or moral causes, has been made by attentive observers; and in considering the subject, it is a division of great practical importance. Under insanity from physical causes, are comprised those cases which arise in conjunction with alteration of structure in the brain itself, in the viscera of the thorax or abdomen, or with alteration of the functions of the brain, dependant on altered functions of the genital or biliary systems, &c.

In the class of insanity from moral causes are included those which arise from hereditary

predisposition, acted on by the influence of the depressing or exciting passions suddenly or intensely produced; the influence of that miscalled religion which addresses itself to the fears rather than the hopes of man, and the sudden alternations of emotion, which the complicated interests and numerous cares of civilized life produce.

It is proposed first to investigate the alterations of structure which have been noticed by authors whose great opportunities of observation entitle them to our confidence, as occurring on opening the bodies of lunatics. Nothing probably is more difficult than to estimate the exact worth of such alterations in structure. Every one who has studied morbid anatomy must have been struck with the amazing extent to which disorganization of the brain may be carried, without the intellectual functions being impaired. Great and intense pain exists in the brain for months; it is occasionally accompanied by vomiting, followed by diminution of the perfection of the external senses; there is dimness of sight or deafness; the smell is morbidly acute; paralysis follows. On opening the brain tumours are found, either scrofulous or malignant, in its substance; yet, from the commencement to the conclusion of the disease, the mind has never varied, the patient has not suffered in perception or volition, her affection for her family has been

unimpaired, she has been capable of consulting on affairs of importance, and able to enter into and receive comfort from the highest duties of religion: and this is no hypothetical case. Is it not bold, therefore, to assert, that where none of these signs of physical infirmity exist,—where there is neither depraved sense, nor diminished motion nor sensation, but where a train of incoherent ideas, shuddering fear, or extravagant ecstasy, or gloomy pride are present,—that it is useless to apply to the art of medicine, for these probably depend on organic disease? Even where, after death, slight deviation from the ordinary appearance of the brain or its vessels is found, it is very necessary to be cautious in forming an opinion; for similar appearances exist in cases which have never shewn symptoms of aberration of intellect.

In the cases related by Dr. Haslam—and I purposely choose examples from those authors who have had undoubted means of observation—the appearances described after death are by no means convincing of the physical nature of the disease. Persons who carefully observe dissections of patients dying of different diseases, will be struck by the variety of thickness or thinness in the bones of the skull, and the variation in the degree of firmness or softness of the brain, dependant on the season, the length of time during which the patient has been dying, and on age;

and such great variation occurring in cases in which no alteration of perception had existed during the life of the patient. The same may be said of the presence of vesicles in the choroid plexus: such bodies being found occasionally in maniacal cases, by no means proves that the malady owed its origin to this deviation from natural structure, since they exist very frequently, and to a great extent, without the functions of the brain apparently suffering. There is perhaps, however, no appearance on which so much stress has been laid as on congestion of the vessels of the head; the mechanical physician having his scruples satisfied by a very slight injection of the vessels of the brain, while the morbid anatomist must have observed almost every variety of intensity of this appearance, often unattended by corresponding symptoms of excitement, or disturbance of the brain during life. Of effusions into the ventricles of the brain the same may be said: fluid is undoubtedly present in a healthy condition, as may be, and has been, proved on dissection of living animals, and it probably varies in different animals, according as their life is more perfect—large, strong, and lively animals having a larger proportion than those in a weakly or pining condition. It has repeatedly occurred to me to witness a few drachms of fluid in the ventricles assigned as the cause of death, when I have immediately afterwards observed

in the dead-house of the hospital twice the quantity, in cases where the patients had died of inflammation of the viscera of the abdomen, or some other disease, with which, visibly at least, the functions of the brain had not sympathized during life. It is remarkable that in that particular alteration of the structure of the brain which principally occurs in aged people, and to which the French pathologists have given the name of *ramollissement du cerveau*, in the numerous cases related by M. Rostan, almost all of which occurred in persons above fifty years of age, notwithstanding the frequent alteration of sensation and motion, and the still more frequent change in the external senses, the intellectual faculties often remained unchanged.

Various observers in various countries have, however, adopted views of the local or material cause of insanity. In this country physicians generally incline to the belief that congestion of the brain is the immediate cause, or thickening of the membranes, especially of the arachnoid membraue, or preternatural thickness of the bones of the skull ; others, on the Continent more especially, have been more precise, one author having frequently observed calcareous matter in the pineal gland. Meckel speaks of the preternatural hardness of the corpora striata in cases of melancholy : Gall considers that the crura

along with plethora, when of course quite a different plan of treatment will be necessary.

VII. *Tinnitus aurium*, or a sound as of noises in the ear, is an analogous symptom, being usually accompanied with feebleness of pulse and respiration, a pallid complexion, &c. When from plethora, and premonitory of apoplexy, the sound is of a strong loud character.

VIII. *Coldness*. Patients sometimes complain of habitual deficiency of warmth in some particular part of the body, especially a finger or toe ; such a complaint should never be heedlessly passed by without its leading to a minute examination of all the organs and functions intimately connected with the nervous system, otherwise the supervention of an unlooked for attack of apoplexy or paralysis, may bring deserved reproach on the medical attendant. Local weakness, as of one eyelid, and a sensation as of the crawling of an insect, are symptoms of a similar nature.

As morbid conditions of the *Senses*, may be mentioned,

I. *Dimness of Sight*. The source of which is generally cerebral congestion, occasionally associated with exhaustion and debility ; but to adopt indiscriminately, under this idea, a stimulating course of treatment, cannot but be eminently prejudicial.

II. *Double Vision*. In cerebral affections this is an indication of great danger ; it sometimes arises from sympathy with a disordered stomach, or from debility.

III. *Excessive acuteness of Hearing*. This is often one of the most trying symptoms of phrenitis

during its first stage ; it may also be occasioned by the opposite condition of exhaustion after frequent venesection or haemorrhage.

IV. *Dullness of Hearing* is common in the latter stages of typhus fever and phrenitis, probably in consequence of secretion into the internal ear ; in other instances it is the effect of the extension of inflammation of the fauces along the eustachian tube.

V. The *Sense of Taste* is depraved in dyspepsia : it is altered in cerebral affections ; as also are often the other senses of *smell* and *touch*.

VI. The *expression* of the countenance is a very important indication, especially in the complaints of children, who are so little able to describe in words the nature of their sufferings. A mother often observes some change in her child's countenance, which is not evident to the eye of the medical practitioner ; let him not disregard her observations, otherwise he may discover too late how far from foundless were the apprehensions which he neglected : drowsiness, fretfulness, and an unnatural expression, may be the only symptoms of the existence of an attack of hydrocephalus, until the disease shall have become incurable.

VII. *Defective Articulation* is another important symptom in children : the first thing which attracted my notice in a little boy of my own, previous to an attack of phrenitis, was his inability to pronounce the W as before.

VIII. *Excessive Drowsiness* in advanced life is premonitory of apoplexy, as it is in infancy of hydrocephalus ; in children, who are observed to sleep in an unnatural position, the head being thrown back, and the body changed from the beautiful relaxed form in

period when he appeared to be convalescent, suddenly violent maniacal symptoms arose, attended with a prevailing fear that he was doomed to expiate, in prolonged tortures, crimes probably imaginary. Local depletion in the region of the heart, and the constant application of ice to the head, during many successive days, removed the symptoms, and the patient has been now during several months quite well.

Corvisart, in his beautiful work on diseases of the heart, adverts to the influence of the heart on the intellect, remarking that in the third period of aneurism of the heart, the patient is often attacked with furious delirium. It is probable, likewise, that some of the cases of insanity arising from perverted passions, disappointed affection, loss of friends, sudden diminution of worldly possession, or the spectacle of some unusual and appalling crime, may be intimately connected with the influence of such impressions on the circulation. It is notorious that, during the terrible scenes of the French revolution, organic diseases of the heart, as well as cases of aberration of mind, were wonderfully increased; and it is far from improbable that the diseases of the heart, brought on by long watching, frequent peril, and urgent anxiety, were productive, in their turn, of such an influence on the circulation in the brain as to alter its powers of perception. In advanced life,

there is no doubt that the influence of the diseased structure of the heart is the principal cause of the most frequent and most fatal of the diseases of the brain. Sanguineous apoplexy, if not in all, certainly in the majority of cases, arises from the increased size and force of the muscular parietes of the left side of the heart, impelling blood into the vessels of the brain, which vessels are rendered weak from steatomatous, or unyielding from bony deposits in their coats. In studying, then, the organic changes in the human body which produce alteration of the functions of the brain, it will not be sufficient to observe the condition of the brain alone—the state of the heart and great vessels must be carefully investigated; and these being found healthy, we still are not enabled to conclude that no local cause exists which may have excited sympathetic disturbance in the sensorium.

The third series of organic causes is to be found in the diseases of the abdominal viscera, between which and the functions of the brain, there is a wonderful sympathy. It is true that inflammation of the bowels will proceed rapidly, and terminate fatally, without involving sympathetically the intellectual functions; but, on the other hand, the degree in which these functions, and even the external senses, are disturbed, by the

diseased secretions of the stomach, liver, and small intestines, is manifest to every one. The severe and agonizing head-ache experienced by some patients, from the simple distention of the great intestines, is a familiar instance of this connexion.

In cases of melancholy or suicide, such considerations would carry our attention especially to the condition of the viscera of the abdomen, and accordingly we find great care has been taken by continental observers in investigating this condition. From their researches it would appear that certain peculiar appearances in the great intestine had struck, simultaneously, physicians in different countries, as presenting themselves in the bodies of melancholics. Greding, and other German physicians, appear to have noticed this change, but it was first made generally public by a memoir of Mons. Esquirol, published in 1818, on the subject of the displacement of the colon in madness ; and it is to be observed, that this is the work of a very laborious and learned physician, possessed of the opportunities of more extensive observation on these subjects than any other physician in Europe.

Mons. Esquirol relates numerous cases in which the arch of the colon was found after death displaced ; often low down in the pelvis, and

always in the hypogastric region. He expresses himself in the following words on the alteration in position.

This displacement cannot be attributed to a mechanical cause, dependant on the thickening of the parietes of the colon, or the accumulation of fæcal matter in its interior, for in the greater number of subjects which I have opened, the colon was empty, and in all healthy. The same was the case with the ascending and descending portions of the colon, which by their action might have dragged down the transverse portion. Neither is this displacement the effect of the last disease of the patient, for the same appearance presented itself in the bodies of maniacs who died of different diseases.

It must be observed, that in the majority of cases related by Mons. Esquirol, where these appearances presented themselves, organic disease of the brain also existed. After the appearance of Mons. Esquirol's paper, the subject appears to have attracted the attention of the German physicians, and Bergman, especially, investigated the subject. Bergman relates numerous cases of the same appearance, but remarks, in addition, the frequent irregular contraction of this portion of the colon: other physicians have since made similar observations,

but none seem to have endeavoured to ascertain the fact whether similar irregular contractions and displacements of the great intestine are not frequently found in individuals who have never been affected at any period of their lives with aberration of intellect. The learned authors of these observations are of opinion that this peculiar condition of the lunatic may be distinguished during life by the presence of the following symptoms, and they are more particularly adverted to by Bergman. “ The patients suffer a sensation of pulsation and undulation in the abdomen ; this is particularly felt in the umbilical region. The belly is often hard, and externally different tumors are observed, which vary in shape and hardness : a certain degree of pain more or less severe is felt in the region of the arch of the colon. The region itself is tender, but the nearer the patient approaches to the state of fury, the tenderness becomes less. The position of the patient is inclined forwards ; there is great anxiety about the præcordia ; the skin has a bluish tint, and is very cold to the touch. These last symptoms Bergman considers to be characteristic of the disease. There is obstinate constipation ; the fæces are hard ; and nausea and vomiting are often present. Trembling is present ; sometimes convulsions and epilepsy. These agitations principally occur when the patient is at stool. Insurmountable thirst and want of sleep harass the patient.

The mental derangement which accompanies these affections is of the chimerical kind ; he imagines he has frogs or serpents in his belly ; fantastic images and frightful dreams distress him ; he becomes first maniacal and then furiously mad. In this state the sensorium no longer perceives the local disturbance, which is indicated only by the inordinate movements of the limbs ; trembling, convulsions, tetanus, epilepsy, shivering, diarrhoea, and a difficulty of passing urine, immediately precede death."

As far as I can learn, this peculiar change in the great bowels has not been observed in this country, either at Bethlem or elsewhere ; but it is probable that in many instances the attention in dissection has been directed entirely to the condition of the brain. Esquirol states that in melancholia this alteration was observed in thirty-three out of one hundred and sixty-eight patients.

The very name of melancholia explains to us the ideas entertained by the ancients of its cause,—the stagnation of blood in the peculiar circulation of the bowels, the imperfection of the bile derived from this blood, and the consequent imperfect separation of chyle from excrementitious substances. In jaundice no doubt exists that the bile carried into the vessels occasionally produces mania, and often delirium, and such a symptom is greatly and justly dreaded by the physician : but such

cases are rare, and notwithstanding the general belief that melancholy especially depends on the congested state of the liver and spleen, or organic disease of these viscera, the proof is extremely difficult.

Fourcroy asserted that biliary concretions most frequently accompanied melancholy; but it is almost needless to remind those who hear me how very many cases present themselves where biliary calculi are found after death, without any mental disorder during life. The most violent case of the presence of biliary concretions which it ever occurred to me to witness, was unattended with the smallest disorder of the intellect; and, in this case, the gall bladder was filled by numerous and large concretions, so as to distend it to a considerable size, no liquid bile being found in it. In modern times, Cabanis, metaphysician as he was, looks to the derangements of the liver and spleen as the immediate cause of melancholy; Foderè has adopted the same view; and even Mons. Esquirol, evidently from practical considerations, leans to this explanation, and, without excluding other causes, attributes the greatest importance to the congestions of the abdominal viscera. "The change," says he, "from a dry summer to a wet autumn, is very favourable to the development of abdominal diseases, on which suicide so often depends:"

but the organic diseases of the liver, in such cases, were very few in his observation:—"Of one hundred and sixty-eight melancholics, only two had organic disease of the liver, whilst there were sixty-five cases with organic diseases of the lungs. Mons. Falret, one of the latest writers on the subject, believes that the disorders of the digestive organs are the consequence of the disease, as the passions of the mind are seen to influence the secretions of the abdominal viscera.

But the most evident causes for the disturbance of the functions of the brain, from sympathy with the disturbed functions of other parts, are found in the various changes which occur in the generative system. In women, from the commencement of puberty to the termination of that period when the uterus becomes unfit for its specific purposes, the brain is liable to be disturbed by every change, whether healthy or diseased, of the uterine system. In early life, when the catamenia first occur, at each returning month, in delicate girls principally, the mind is affected. If imperfectly established, great bodily pain, with violent headaches, arise; if the catamenia are profuse at an early age, quick and irregular action of the heart and arteries, faintings, fretfulness, and visionary alarms, and even epileptic fits, ensue. Some females are obliged at this period to seclude themselves entirely from the family; their minds being disturbed in

every gradation from feelings of distress or discontent to absolute aberration of intellect. Who shall attempt to describe all the variations of spasmodic disease which attend this period of life? Sometimes the disturbance of the mind is shewn in the numerous forms of imposition attempted by the patient on the attending practitioner. Sometimes inordinate pains are complained of in the region of the bladder; and, if the disease be doubted, the patient will have recourse to some means, in her own idea conclusive, to convince all beholders: thus persons, at this period of life, have professed to have passed gravel, or sand, which, on examination, proved that it never could have been generated or contained in an animal body. At other times, inordinate vomiting is the symptom for which medical advice is required; and it has occurred to me, as it has doubtless to others, to find this incessant vomiting kept up by substances taken for the very purpose by the patient herself. Sometimes the patient cannot swallow; at other times she loathes food, and will exist on almost incredibly small quantities of it: and yet these patients have received an education which would make them shun falsehood on any other subject, and are of a rank in life where nothing was to be gained by pity, except that commiseration, attention, and astonishment, which excite and occupy the mind.

Is it possible to conceive such cases otherwise than the result of an alteration in the mental faculties, nearly allied to mania? As far as I know, such cases always occur in young females, and mostly in persons labouring under some deviation from a healthy condition of the menstrual discharge: I have never met with, nor heard of a case of this description, in women who have borne children.

The evils which attend gestation and delivery are, however, even greater in reference to the alteration of the functions of the brain. The early months of pregnancy are attended, in some women, by a moroseness of temper, a disinclination to all which is generally most pleasing to them, even a diminution of affection for the dearest objects of their care, which amount very nearly to insanity: occasionally this distress of mind is manifested by unreasonable dislike to some formerly cherished friend or relative, and all these unnatural feelings disappear about the period of quickening. In others, the latter months of pregnancy are the moments of despair. Even when the child is born, or during the period of nursing, a mania peculiar in its character arises, familiar to all physicians in extensive practice, and, from the peculiar condition in which it arises, is termed puerperal mania. It would appear from the masterly paper of the late Dr. Gooch on this

subject—a paper which is a model of medical description—that this disease, generally looked upon as the mildest and most curable form of insanity, is oftener fatal than is generally believed: he proves that it principally arises in exhausted* constitutions, and is a disease of excitement without power; that when the disturbance of the circulation is moderate the patient is likely to recover; when there is a very rapid and feeble pulse the disease is likely to be fatal: in his own practice such a result occurred in about the proportion of one in thirty. All these conditions to which I have alluded are legitimate objects of the care of the physician: there is no alteration of structure in the brain, no unnatural change of structure in the uterus, whether it be the form of disease, where the patient is hurried on to tricks of invention to excite interest and attention,—tricks which at any other time she would herself regard with contempt,—or a state of irritability, from the new and important changes taking place in her frame, or the interesting period when a new being has been produced, or when her efforts to nourish that being are beyond her strength, and prolonged only by a sense of duty, until reason totters: no condition can be pointed out where the duties of

* It appears by a note from Dr. Marshall Hall, in the *Medical Gazette*, that he drew the attention of the profession to this cause of puerperal insanity previous to Dr. Gooch's paper.

the friend and of the physician are of more importance than in all these states.

Among the physical causes of mania the introduction of poisons into the constitution is enumerated by all authors: the three most remarkable in common use, are alcohol, opium, and mercury.

It is well known to physicians that the long-continued use of ardent spirits produces a disease of a peculiar nature, once believed to belong to the class of inflammatory diseases, but now, I believe, pretty generally acknowledged to be an increased degree of sensibility of the brain, without increase of power, and termed delirium tremens; it is cured by sedatives, by stimulating remedies, and a gradual diminution of the indulgence which produced it. In the few cases which it has occurred to me to witness after death, similar appearances have always presented themselves; the brain has been unusually free from what is termed congestion of vessels; the centrum ovale has presented few, if any, of the bloody puncta, or the division of vessels, on which so much stress is often laid, and a very unusual quantity of transparent fluid has been found in the ventricles and between the membranes; to such an extent as to give a wet appearance to the brain itself, very different from its ordinary consistence.

Instead, however, of this trembling delirium, the use of ardent spirits occasionally produces, where large quantities have been taken, furious mania, and this mania continues for several days after the period when intoxication has usually terminated. During this paroxysm the unhappy victim is to all intents and purposes mad ; often committing injuries on the persons of those near him, or menacing his own life. As often as the indulgence is repeated, so often is this dangerous condition renewed, until the safety of society requires that the maniac should be secluded. It is impossible to conceive, in any point of view, a more unhappy condition than that of the patient, when reason returns at the expiration of a few days, or at the utmost, weeks. The patient, perhaps a man in other respects of character and sensibility, finds himself in the possession of his senses and the companion of persons in every stage of insanity. Suppose the owner of the establishment desire his release, his friends urge it, or superior authority compel it. In, unfortunately, far the greater number of cases, he immediately reverts to his former habits, and is remanded to a place of security, under the same necessity for obviating mischief, and to awake to a consciousness of the same misery. Such cases are, unfortunately, too common, and no regulation, no law which has yet been adopted, approaches the case. If those in whose hands the supervision is placed refuse to

exercise their authority, to release the patient when in the avowed possession of his senses, there are many to exclaim against such barbarity. But let us reverse the case, and remember the responsibility which rests on the heads of those who release a man with the moral certainty that he will immediately place himself in a condition to injure, perhaps to murder, those around him.

One of the circumstances not the least remarkable in these cases, is the enormous quantity of ardent spirits which has often been consumed ere the condition alluded to has been the consequence, the bodily health of the patient still remaining unimpaired. There is a case in my remembrance, where the patient was in the habit, for many weeks, of drinking a quart of undiluted spirit (gin) daily, often a pint before breakfast, and yet this man was entirely free from bodily ailment: I have reason to suppose that this is far from being a single case.

The use of opium, carried to a great extent, appears to produce a similar effect to that of alcohol; exalting the sensibility of the brain, until, by long perseverance, exhaustion ensues. It occurred to me, when learning my profession at Edinburgh, to see a very remarkable instance of delirium tremens, from over indulgence in the use of opium. A tradesman, in a respectable

condition of life, finding his business decline, took refuge from care in the delightful sensations produced by opium ; by degrees he increased the quantity, until the dose amounted to two drachms of solid opium ; at length, from distress, he was reduced to extreme poverty, and unable to purchase a temporary solace for his misery. In this state he was brought into the infirmary ; his mind was disordered, and the bed shook under him from the violent and involuntary trembling of his limbs : a dose of opium relieved him, but the instant the effect wore off the same wretched state of mind and body returned. The cure was effected by gradually diminishing the quantity of opium at each dose, and by carefully preventing his leaving the hospital. After some months he recovered ; the humanity of his physician obtained him employment in his former business, and he gave his word (and happily had the fortitude to keep it) never again to take opium in any form. It occurred to me to know two years after that time that he was in a thriving and happy condition.

The influence of mercury on the human body appears to be most beneficially exerted when applied to an inflammatory condition of the system, and consequently to be ill adapted to diseased persons, who have been debilitated by bad diet, close application to study, or exhausting

fatigue ; and even under the most favourable circumstances there are occasionally, but rarely, persons met with in whom this medicine proves a poison even in a minute quantity. Salivation in such persons is speedily produced, and with it delirium is excited : the feverish symptoms soon disappear, but the mental disease continues. The following is a case of this description, which occurred not long since to my friend Dr. Roupell and myself :—

A gentleman, about thirty years of age, habitually of mild disposition, and of clear and calm intellect, was, while much occupied in arduous professional duties, induced to rub in a large quantity of mercury for a syphilitic disease recently contracted. Violent delirium and salivation occurred nearly at the same time : the disturbance of his intellect suggested the idea of inflammation of the brain to those about him ; while the exhibition of brandy, diffusible stimulants and opium, and the admission of cool air, by the order of Dr. Roupell, probably saved him from falling a prey to such mistaken pathology. By degrees he recovered, his mind, however, still remaining in an excitable state. He visited Paris during the tumultuary state of that capital in the autumn, and his perceptions speedily became again disturbed. He was obliged to be put under restraint. Little more was done for him

under this relapse, except insisting upon quiet, with air and exercise; and after about four months he completely recovered.

There is no doubt the mercurial action suddenly and rapidly excited was the immediate cause of this disease; and there is none on my mind, that his cure would have been perfect from the medical treatment in the first instance, had proper quiet been enforced.

There is one set more of causes, to which all writers, foreign or British, attach considerable weight: these are depraved habits in both sexes, contracted often at a period of life when either their criminal nature, or their unhappy and fatal consequences, cannot be estimated. I may be excused going further into the subject than by allusion to them; but they are, in fact, the frequent cause of mental derangement; and there is scarcely, in this city, a single asylum which does not contain some of the unhappy victims of this vice.

The late learned Dr. Beddoes was much struck with the prevalence of this dreadful habit in schools, and took great pains to warn the public of the fact. To his essays entitled "Hygeia," and published in the early period of the present century, I must refer, happy to escape the task

of dwelling upon a subject distressing to the best feelings of our nature.

The proportion of insane cases admitted into various large establishments, in which mania arise from bodily or physical causes, is small in proportion to those cases of insanity which appear to have been derived from the influence of moral agents.

In the accounts of physicians on the Continent, hereditary predisposition is reckoned among physical causes. Excluding these, we find the following calculations.

According to M. Esquirol, of 442 cases of mania, 121 arose from physical, 321 from moral causes.

The moral causes were in the following order :

Domestic affliction caused the greatest number.

Disappointed love.

Fear.

Poverty.

Reverses of fortune.

Jealousy.

Disappointed ambition.

Anger.

Excess of study.

Physical causes :

- The greatest number after childbed.
- From disordered menstruation.
- Intoxication.
- Exposure to heat.
- Blows.
- Depraved habits.
- Mercury.
- Fever.
- Repressed eruptions.
- Apoplexy.

In melancholy, 207 arose from moral causes ; 165 from physical causes.

And here again, by far the larger number from moral causes were those arising from domestic distress ; 2dly, from disappointed love ; 3dly, from reverses of fortune. Among the physical causes, as before, the largest proportion were after childbearing, or from disordered menstruation.

On the whole, in every variety of mania, Esquirol conceives that the moral are to the physical causes as four to one.

But the journals of other institutions by no means corroborate this estimate.

Casper states that of 1069 maniacs who en-

tered the Bicêtre during the years 1808-9-10-11-12 and 13, 536 cases arose from moral, and 553 from physical causes.

From the table of the maniacs in the Asylum at Waldheim, the cases from physical causes are in larger proportion than the moral, being as 116 to 53.

Very large allowances must be made for the accuracy of such statements; and they can at best be only considered as approximations to the truth.

At the next Lecture I shall endeavour to describe the remarkable symptoms of mania from moral causes; and point out some of the difficulties of diagnosis.

II.

IN my last lecture I endeavoured to lay before you, as far as my limits would allow, those causes of maniacal derangement which have been termed physical.

Those cases which are, or ought to be, remediable by the medical art, bear only a certain proportion, and not a large one, to cases of insanity derived from moral causes. Of these last, we have seen that by far the most frequent are domestic afflictions, loss of friends or domestic comforts, or that fortune which entails the loss of both. Jealousy, ambition, terror, and superstition—the vice of weak minds, likewise appear to be frequent causes of the malady which usurps the seat of reason.

The fact of these causes existing, a fact of daily observation, early drew the attention of physicians and philosophers to the immateriality of insanity. They could not attach to any specific lesion of structure such destruction of intellectual faculties ; they sought, therefore, to dis-

tinguish the effects by grouping together the principal symptoms, and assigning to each group a particular name.

The aberration of the intellect has been divided into three kinds; melancholy, named by continental authors, monomania; mania, the amentia of systematic writers; and idiotism or idiotcy.

Monomania, in its various forms, comprises by far the greatest portion of the cases of insanity; and has been subdivided in the following manner:

1. All the moral faculties of the patient are absorbed in the design of injuring himself personally, or in the contemplation of supposed personal ailments. This is termed hypochondriasis, or *tedium vitæ*.
2. When monomania is accompanied with aversion to society, or even to the presence of the human species, it is called misanthropy.
3. Monomania presents often the disorder of the imagination which relates to change of person; the patient supposing he is the Saviour or the Deity, or that the soul of another person exists in his body.

Of this kind was the celebrated case at the Bicêtre at Paris, of the unhappy person who, terrified by the excesses of the French Revolution, imagined that he had suffered the stroke of the guillotine ; and, on being summoned to the last judgment, had adapted another sufferer's head to his own trunk.

At the Asylum at Charenton, I visited a patient who had, for many years, been impressed with a conviction that he was the Apostle St. Peter. And it has happened to me to see a patient in London who has a no less certain conviction that he is the Saviour of the world.

4. At times, and, indeed, very frequently, the perverted imagination is filled with religious terror ; and, of all the forms of monomania, all authorities agree that is the least susceptible of cure.

The predominating quality of these cases of derangement is terror—either fear of detection for some dreadful crime supposed to be committed ; or of personal injury actually about to be perpetrated ; or conspiracy for depriving the individual of certain rights or privileges, or the possession of property. Such cases would involve a very large proportion of persons under restraint, —perhaps two-thirds. Thus, cases are frequently

met with where the idea predominates that the patient has stolen something, or that a theft is to be imputed to him for the sake of punishing him capitally and wrongfully. At other times, and such a perversion of intellect is very common, the patient feels a conviction that all presented to him is poisoned. He will be conversing rationally, even eloquently, and with every appearance of perfect judgment ; but if food be brought, will refuse it suddenly, or break off his discourse to examine minutely every article, rubbing the salt between his fingers, as if suspicious of adulteration, or sipping the water, in hopes of detecting a perverted flavour.

Sometimes he commences a history of the attempts made by poison on his life, so correctly stated that, except to persons well acquainted with the facts, the order, regularity, and consistency of the tale would carry conviction of its truth.

Sometimes the morbid conviction is still more afflicting. It has occurred to me to see a patient who imagined that each evening he was assassinated by violent blows given him on the head ; and he shuddered as he told his tale. Oftentimes the first instance of mental derangement of this form is the hatred of some hitherto cherished

friend ; then comes the fear of conspiracy, which rapidly occupies exclusively the mind.

The second form of mental derangement is termed mania. This shews itself under forms wholly differing from monomania. Instead of a specific, fixed, and invariable object, mania extends over a multitude of different circumstances, connected with which are vague and incoherent ideas succeeding one another without order. Fantastic images present themselves to the imagination—sometimes gay, noisy, and violent, suddenly alternating with sad, melancholy, or horrible visions, regularity unlinked by associations, like the brilliant and fitful apparitions of a morning dream. In this form of madness, where all the faculties of perception appear exalted in intensity, the disease is termed dementia: where, on the contrary, the images presented to the sensorium are indistinct and slow, where perception may be considered to be diminished, it is termed amentia.

Idiotism, the third division of insanity, comprises those beings who have only an organic life, to whom existence is a blank, who have no relation with external objects ; who exist and grow as long as they are fed and tended, but who are devoid either of reason or instinct.

The vast change which takes place in the manner in which objects are presented to the mind, suggested to philosophers to examine and reason on the subject ; and hence arose the metaphysical science of ideology or psychology. From the most ancient times philosophers have arisen, employed in speculating on, and endeavours to explain, our perception ; but, unfortunately, like the philosopher who demanded more time to reflect on the nature of the Deity, the time which has elapsed has served rather to mystify than clear up the subject. Plato, Aristotle, Bacon, Locke, and Condillac, names which will live for ever, have all endeavoured to explain the nature of human reason, and the pre-existence of ideas in the sensorium, or that ideas were the result of sensation. Unhappily the perversion of ideas has thrown little light on the subject : it will not be necessary, therefore, to dilate on these points.

It is necessary, however, to consider the perversion of sensations in mental derangement, for these constitute a large portion of the external character of the disease. The sensorium judges under what may be called false representation. It has not yet been proved whether local injury, or disease of the external senses, are capable of producing mental aberration. A few cases would lead us to suppose the affirmative. Reil relates

the case of a lady who, in daylight, and with her eyes open, thought that spectres, of different forms and sizes, followed her everywhere. On one occasion, when hurrying to catch one of the imaginary phantoms, the nurse applied her hand over the eyes of the patient, and she immediately became rational. The disease returned on exposing the patient to a bright light.

The most imperfect of the external senses are those which we should expect to be the most frequently affected in mental derangement, and this we find to be the case. The sense of hearing is the one most liable to perversion, and indeed a considerable proportion of cases of mental delusion have reference to the perversion of this sense. Nothing is more common than to see a man, otherwise sensible, and with even powers for reasoning acutely, assert that he has communications with the invisible world ; that spirits whisper to him, warn him from injury, and counsel all his proceedings. At other times, animals copy his expressions or use abusive epithets ; at other times, his enemies employ tubes constructed on peculiar acoustic principles, to irritate or goad him into madness. There are many such cases as these, and they are very difficult to judge of, for the patient most carefully conceals this weak point of his imagination, until some accidental circumstance betray it. It occurred to me to see

a lady, related to persons who had suffered during many years from mental derangement: she was what is termed very nervous, easily disturbed by the slightest external impressions; her mind was affected on the subject of certain noises which she heard, but only with one ear. Swearing, and obscene impressions, with subjects which gave the patient the greatest possible distress, were communicated through the left ear: in other respects the patient was collected.

Memory is one of the most important functions—not to assert with Helvetius the most important function of the human intellect. It is the faculty which places us in relation with past events: it offers us objects recently seen, long past, and occasionally recalls circumstances long since forgotten. It is equally remarkable when studied in reference to mental derangement.

As the intellectual powers decay, it is well known that recent events vanish from the mind, while those which had occurred in the spring of our lives still remain fresh even in the twilight of our reason. In disease the alteration of this faculty is still more remarkable. It occurred about two years since at St. George's Hospital, that a patient affected with scarlatina was attacked, after the subsidence of the disease, with symptoms of effusion into the brain; the pupils

were dilated, the pulse irregular, and the patient completely comatose, the faeces and urine being passed irregularly. The use of venesection, mercury, and digitalis, restored the patient, but her powers of perception being returned, she was unable to recollect recent events, and singularly unable to express her ideas. By signs she could shew she knew the hour, when a watch was held before her, but she could not remember the words expressive of the hour; when better, all the recent events before her illness were still banished from her remembrance: she is still living and in good health.

In mental derangement the memory is either increased, diminished, or destroyed: in the monomania it is generally increased. In mania it varies from uncommon strength to great feebleness. Thus maniacs remember with great perfection all the circumstances attending violence or insult: in general, however, the ideas succeed one another with such rapidity—the impressions presented to the brain are in such number, and so rapid, that they leave slight traces behind them. It is very remarkable, however, that patients restored to reason often retain a wonderfully exact recollection of all which befell them during the period that their mental malady obliged them to be under restraint.

Of all cases which may be classed under disease, cases of monomania are often the most difficult to discover. The patient often most carefully conceals the subject on which his mind is perverted, and still more carefully, if he conceives it is the object of the inquirer to detect it. Hence the various opinions which are given in a court of justice on the existence of insanity. It has occurred to me to see several cases where the existence of insanity was doubtful, and where men of character, experience, and judgment, had formed various opinions on the subject. A gentleman, about forty years of age, was restrained in consequence of alleged insanity: it was impossible to detect from his manners or conversation, in repeated interviews, any aberration of intellect; at length, in a moment of confidence, he related his being tormented by sounds, whisperings, &c. during the day, and similar sounds conveyed by pipes under his bed at night; and very justly he reasoned on the conveyance of sound, the improvements by elastic tubes, and on the principles of acoustics: he was wrong only on the matter of fact.

This is a very good illustration of a case of monomania; and then commences a train of reasoning on the case, as to the inexpediency, the absolute cruelty, of confining a man, depriving him of his personal liberty, merely because he imagines he hears disagreeable noises; he rea-

soned apparently accurately on other subjects, and wrote not only correctly, but with singular facility and clearness.

On inquiry, there was reason to believe that this patient had made two attempts on his own life, and it would appear that such cases very frequently terminate in suicide; this, then, is the most convincing answer to the propriety which is questioned of seclusion. The following is an instance of this tendency. A lady of middle age was observed to have contracted suspicions that certain persons harboured malicious intentions towards her: the subject did not present itself frequently to her imagination, and in all other respects her mind was as usual, not very strong indeed, but not deviating in any way from her usual habits or modes of thinking: nobody thought of restraint, her prejudices exciting only disappointment, and some little surprise. In the middle of the night this patient suddenly rose, and threw herself into the area of the house where she resided; the fall broke both her legs, which were set under proper care, and she recovered her bodily injury. She remained, however, and I believe still remains, completely perverted in her mind. These cases, and they are merely illustrations of a class of cases, suggest the extreme caution which should be used in examining a patient previous to sanctioning the confinement. After frequently repeated

visits, during which the patient has displayed strong powers of reasoning, brilliant imagination, and great extent of learning, the merest accident will touch the train of perverted ideas, and the volubility of his insane expressions is perfectly astonishing. In cases of mania the intermissions, or lucid intervals, are most remarkable. A case was shewn me some years ago, at the retreat at York, of a person of the mildest and most inoffensive manners ; and this condition was uninterrupted for several months at a time, when, suddenly, furious and destructive mania would ensue to so dangerous an extent that it would have been a fatal error to have caused the release of such a patient.

In cases of perverted mind, especially those unconnected with physical causes, moral management has always occupied the attention of physicians ; and all persons appear to consider the first step towards recovery to consist in removing the patient from his accustomed home and habits. Such is the opinion of all persons, almost without exception, who have had much experience in the treatment of lunatics. Pinel is of opinion that the patient should be separated from every object which could remind him of the cause of his afflictions. He relates the following case : “ A foreign merchant, become melancholic in consequence of deep distress, and

the loss of his fortune, was transferred to the Bicêtre. The re-establishment of his reason by moral treatment made rapid progress ; and I had repeated conversations with him without perceiving the least perversion in his ideas. But all was changed in a few days : he learned that his partners had appropriated to themselves a portion of his furniture ; and a woman had even the impudence to visit him, wearing some ornaments which he could not help recognizing as having belonged to him. He sighed deeply, fell into fearful melancholy ; which, by degrees, conducted him to violent and incurable mania." Notwithstanding this general opinion, it appears that cases may exist where a return to these very objects, about which the mind is apt to be confused, is attended with great benefit. No author, foreign or British, has placed this in so clear a point of view as the late Dr. Gooch ; and his opinion is extremely well expressed in his own words. "The last rule I have to mention," says Dr. Gooch, "relates to seclusion and control. There can be no doubt that it is generally necessary and useful to separate the patients from all those persons who are sources of excitement of any kind. This, however, can be effected only in one of two ways,---either in a separate house, or part of a house, where the patient has no other associates but her nurses ; or in a receptacle for the deranged, where she has no other associates

than her nurses, and persons similarly afflicted with herself. This is the only society she has, except the short and occasional visits of the physician. Thus the power of controlling her, even by force, is placed in the hands not of enlightened and benevolent persons, but of uneducated menials. I do not know how it can be otherwise, though I wish it could. There may be cases, or there may come a time, at which some interruption to this solitary life may be advisable. When the disease has lasted long—when the patient expresses a strong wish to see some near friend—when she entertains illusions which the sight of some may efface—the admission of such person is worth a trial. I shall be told, that when persons are mending, or have recovered, the most common cause of relapse is too early an introduction of friends, and too early a return home. When the patient is recovering, or has recovered, I do not recommend these measures: it is when the patient has not recovered, and is not recovering, that I advise them to be tried; when month after month passes without any amendment, and her mental delusions assume a shape accessible to moral impressions, then it is that I would advise an interview with a friend.” Dr. Gooch subjoins a case of great interest, illustrative of his views, but too long for our limits: I must refer to the interesting work in which it is contained. A note is likewise quoted, confirmatory of the opinion

entertained by Dr. Gooch, from Dr. Haslam : it is as follows:

“ It is my opinion that confinement is too indiscriminately recommended and persisted in. In many instances an intercourse with the world has dispelled those hallucinations which a protracted confinement would, in all probability, have added to and confirmed. In its passive state, insanity has often been known, if the expression be allowable, to wear off, by permitting the patient to enjoy his liberty, and return to his usual occupation and industrious habits.”

The greatest possible prudence is necessary in applying this particular kind of moral management, and it is only to very peculiar cases that such treatment is applicable. Perhaps there is no remedial process in any disease which requires so much firmness, mildness, and sagacity, as the proper regulation of moral restraint in cases of insanity.

The subject of restraint leads us to the next consideration, namely, coercion. The idea of bodily coercion is so painful to every feeling mind, that the very association of it in idea has made mania more terrible to the imagination of the world at large even than it really is. The uninstructed, associate stripes and straw as

the necessary lot of persons suffering under aberration ; and so aware are shrewd people of this strong feeling in the minds of the public, that whenever an uneducated man lays claim to the cure of insanity, he advertises that no corporal restraint is permitted under his system. Where feelings are concerned, mankind seldom take the trouble of reasoning accurately, or they would soon discover that there are cases in which restraint is absolutely necessary, especially among the lower classes; and that without it, many of them would murder one another—(an unhappy instance of which recently occurred in St Luke's Hospital)—or destroy themselves. It is this strong, and predominant, and praiseworthy, but injudicious feeling, to which Dr. Heberden alluded a few years since, in his evidence before a Committee of the House of Peers. “It is very easy,” says Dr. Heberden, “to declaim on such subjects as cribs and straw ; but, in fact, if a person is in such a state of mental derangement as not to be attentive to the common calls of nature, cribs and straw are the most comfortable way in which he can be placed,—much better than a down bed, and all the curtains and apparatus of a fine bed-chamber. With reference to their confinement at night, those people that are in the worst state are confined by a manacle which goes round one wrist, and attached by a chain to one side of the crib ; the other side being high,

and there being no danger of their doing themselves any mischief: that is the general way in which they are confined, which is a confinement which does not lay them under any great difficulties."

The methods of coercion, in cases of violent mania, usually consist in a waistcoat, leathern gloves, or handcuffs made of polished iron. The first is perhaps preferable to the others, except in very violent cases, when it is speedily torn to pieces by the maniac. It is also very oppressive in warm weather, and occasionally irritates the sufferer to an extreme degree. The natural repugnance to the employment of irons, made me (the first time I witnessed it) regard with great dissatisfaction the use of handcuffs made of that metal; but I was speedily convinced, by extensive observation, that of all methods of restraint these were the least afflicting to the unhappy patients, the polish of the surfaces compensating for the distress of the pressure; while the gloves rubbed the wrists of the restless patients into sores, and the confinement of the waistcoats irritated and distressed them.

It is a very extreme and aggravated case which requires more coercive measures than those alluded to; and it must ever be borne in mind that these are only applicable to very severe

cases ; and such constitute a very small proportion of persons affected with the disease. Practical experience has long since exploded the horrible treatment of the disease itself by violence ; and it is not to be supposed that even the most enthusiastic admirer of the ancients will agree with the recommendation of Celsus on this subject,—a recommendation which, probably, has entailed more distress and affliction, and I may add bad practice, on mankind, than the Roman physician could possibly have foreseen. Speaking of the maniac, he says, “ *Ubi perperam aliquid dixit aut fecit, fame, vinculis, plagis, coercendus est.*” Unhappily, on this system of cruelty many institutions for the reception of lunatics were formerly conducted. It would appear that there is none, even in any remote portion of the civilized world at present, where such proceeding would not be held in just abhorrence.

That such a system existed at no very distant period in France, we learn on the authority of Pinel :

“ It was on analogous principles that a monastic institution of great renown, in the South of France, was conducted. One of the superintendents made every day the tour of the cells ; and, when a lunatic acted extravagantly, was boisterous, refused to go to bed, or to eat, &c., signi-

fied to him an order to alter his conduct; and warned him that his obstinacy in continuing such conduct would be punished the following day with ten stripes. The execution of the sentence was always punctual; and, if necessary, was frequently repeated. Nor was the superintendent more remiss in recompensing than in punishing; and if the lunatic was docile and submissive, he was permitted to take his food at the refectory, by the side of the governor, as if to give him a trial. If he forgot himself at table, or committed the smallest fault, he was instantly made aware of it by the stroke of a stick briskly applied to his fingers; and afterwards it was added, with calm dignity, that he had done wrong, and that he ought to be more careful.

Such a system was evidently an imitation of the methods of instruction which prevailed under the mistaken doctrine that cold and hardships were necessary to the health of the body, and stripes, oppression, and starvation, of infinite service to the rising intellect. These mistakes, it is to be hoped, are wholly abandoned, and such systems remain only objects of our pity and surprise. We shall quit their contemplation with relief, as we investigated them only to render the history of the treatment of insanity more complete, by recounting its errors as well as its advantages.

Of all the remedies applicable to disordered mind, arising from moral causes, employment and exercise are, perhaps, of the greatest importance. Persons who have devoted their lives to the investigation of the nature and treatment of mental diseases, are all agreed upon this subject. Mr. Finch, of Laverstock, was led to devise methods for employing the patients of a higher class in life, from observing that his pauper patients recovered in a greater proportion than those in a better situation of life, which he attributed to their being employed in the garden in working, digging, &c. Mr. Bakewell, of Spring Vale, in Staffordshire, expresses himself thus:—"I think the labour of lunatics might be made productive, and highly beneficial in point of cure: upon all occasions it is of the first consequence with respect to physical health. All that the power of medicine can do is to restore the body to its pristine state of health; the hallucinations of the mind are cured by employment, and diverting the thoughts."

Bodily exercise, however, is not equally applicable to all cases of mental derangement. Bodily exercise is preferable in monomania. All is inactive, except thought, among the greater number of those affected with this species of insanity. It is by distracting the mind that bodily exercise becomes a curative process. In addition to this, its physical effect is of great importance in melan-

choly: it promotes the circulation of the blood, which there is reason to believe moves more slowly than usual in such cases. This is more particularly applicable to the abdominal circulation: the system of the *vena portæ* appears to be especially inert in cases of mental derangement of this description, and by rendering, by means of exercise, the contractions of the abdominal muscles more frequent and powerful, a more healthy circulation is likely to be established in the viscera. In mania, bodily exercise is of the greatest importance during the lucid interval and the convalescence, and even during the paroxysm, if it can be contrived that the patient shall be strongly exercised, until some degree of weariness be produced: calm, tranquillity, and sleep, are not unfrequently the consequences. The affections of the mind have likewise been found of great service in the cure of melancholy. In the better class of society, especially among female patients, the tending of domestic animals, as rabbits, cats, dogs, pigeons, has been followed by a sensible amelioration of the disease of the mind. At the celebrated Quakers' Retreat, near York, I observed that these means were resorted to in great variety, and was informed, often with the most marked advantages.

I now pass to a part of the subject which has excited much attention and some discussion—viz.

the power which lunatics appear to possess of resisting extremes of temperature, and even epidemic diseases, and the suspension which the occurrence of acute diseases is said to occasion in the mental malady. Many remarkable cases have been related of the extreme degree of cold which maniacs endure sometimes, apparently from preference. The famous Theroine de Mericourt, who became maniacal during the violence of the French revolution, was in the habit, at the Salpetriere, where she was confined, of pouring a quantity of cold water into her bed ; almost always she poured it over the part where she lay, and constantly over the floor of her cell. It is stated by Monsieur Guislain, of Ghent, who is the author of a most learned and interesting work on maniacal diseases, that cases occur where even intense cold does not appear to alter the temperature of the surface : he adduces the following example :—

“ There exists at the hospital for lunatics at Ghent, an individual aged 50 years. He has been a maniac several years, and never ceases tearing in pieces his dress, so that he is almost always in a state of complete nudity. In the depth of winter the skin of this man is as warm and perspirable as if he were in a warm apartment : from palsy of the lower extremities he is incapable of exercising himself, but he never appears to suffer from

the cold." Notwithstanding such observations and examples, gangrene not unfrequently seizes the extremities when frostbitten, and the usual diseases of diarrhœa, and inflammatory affections of the thoracic viscera, not unfrequently attack maniacal patients. The best explanation of these apparently contradictory facts is to be found in the perverted mind of the patient ; his limbs suffer, for their sensibility is probably not really altered from the natural condition. But the disordered mind perceives not the bodily ailment, or, to use the illustration of a foreign writer, a blister applied does not, perhaps, attract a momentary attention from the maniae, but it does not the less produce inflammation and suppuration.

One of the first persons who observed that patients affected with mental diseases were less likely to contract bodily ailments, and that severe bodily diseases were controlled and mitigated, or suspended, on the invasion of insanity, was the celebrated Dr. Mead. Speaking of insanity, he says, " But what is principally to be wondered at in this disease, is, that not only those labouring under it are frequently preserved safe from other diseases, but when it attacks any one, it so occupies and lays hold of the patient that it not uncommonly expels and puts to flight the bodily infirmity, and that not a trifling malady, but those which are attended with great peril."

Other physicians have made the same remark, and it is an extremely rare occurrence for epidemic diseases to be found prevailing in lunatic asylums.

It occurred to me, when visiting, many years ago, the asylum for lunatics at Charenton, near Paris, to ask the superintendant, whether the presence of acute diseases suspended or altogether removed the mental distress. The answer was, that they had had many examples of it ; patients having become perfectly sane during a severe attack of fever, and some few appeared to have recovered their senses, others to have relapsed. Esquirol states that he has observed this salutary influence of the law, which seems to effect the suspension of a chronic by the presence of an acute disease. The occurrence of intermittent fever, especially of a quartan type, is considered by many observers of a particularly favourable nature. The following cases rest on the testimony of Monsieur Guislain, Physician to the Asylum for Lunatics at Ghent :—

M. Boatman, aged 40 years, of an athletic temperament, has been for several years at the hospital for lunatics at Ghent. He became maniacal in consequence of violent fright. One day an endeavour was made to seize his person, to impress him into the naval service, but he

fought with such spirit and success that he escaped from the gens d'armes. Some days afterwards he lost the use of his reason, and mania appeared: he was transferred to the asylum. The patient passed two years in that state, and was much feared by his companions in misfortune, on account of his great strength. At the end of this time, and in the early days of November, he was attacked with fever: the fever returned daily with great regularity, and with considerable violence, during two months. At the end of this time the febrile condition diminished, became irregular, and at length ceased completely. A sensible amelioration of the mind immediately followed. The patient became extremely docile; no violent passion was now remarked, still he was not perfectly sane—there still remained some incoherence of ideas; but if I may judge from the present state of the disease, his recovery will not be slow.

The next is the case where continued, or typhoid fever, produced a fortunate change in the mind of a maniac furiously mad.

A Prussian soldier received corporal punishment for a crime committed in his regiment, and from that time mental derangement ensued. He was transported to the military hospital at Ghent, where, after having been only disturbed

in his mind, he suddenly became furiously mad : he subsequently passed eighteen months in a condition completely passive, without the slightest emotion, and without the smallest inclination. An excessive fear was the predominant character of the disease. He was attacked with typhus fever. The period of invasion was soon passed, and was succeeded by an extreme prostration of strength : black tongue, sordes on the lips, livid countenance, involuntary dejections, meteorism, low delirium, and other symptoms of a similar character, marked the height of the malady.— Towards the twentieth day, the patient presented a more expressive countenance ; he lay upon his side, and gave reasonable answers to questions for the first time. He inquired about his condition, the place where he found himself, and other circumstances which related to him ; for some weeks the convalescence was complete, and he left the hospital without the smallest trace of mental disease. It is extremely difficult to reason on these very remarkable cases. With regard to intermittent fever, however, it may be doubted whether such attacks are true ague, or really symptoms of change in the nervous disease itself. Many organic diseases, and none more particularly than those of the brain, shew a tendency in their symptoms to become intermittent. Intermittent head-ache is often accompanied by noises in the head, and great trembling and distress ; but such intermis-

sion is an encouraging circumstance, viewed in reference to the recovery of the patient. My own experience does not enable me to determine this question; but I suggest it for the consideration of those who may have opportunities of observation, whether the intermission is not the result of a change in the sensibility of the brain, arising in the progress of cure, rather than a new disease, occupying the seat of a disease of a totally different kind. Such an explanation cannot, however, apply to the cases in which pulmonary consumption has been seen to be arrested by the presence of mania. Dr. Mead's case is one of the most striking examples, and I prefer it because the authority on which it rests is indisputable. He relates, that a young woman was attacked with haemoptysis, for which she was repeatedly bled; but, although the symptoms were relieved, the disease was not cured. In two months hectic fever supervened, with short cough, thirst, heat, and nocturnal sweats; these were accompanied with great emaciation, and the excretion of puriform matter. True phthisis pulmonalis was present, and death at the very threshold. The patient was desirous of the offices of religion; but it appears she was greatly alarmed by the vivid picture of punishment in another world for unrepentant sinners, presented to her view by the clergy; at least Dr. Mead speaks of their conduct in no measured terms of disappro-

bation. The consequence was, that the unhappy patient became the victim of religious mania—by night and day demons and flames presented themselves to her imagination, and hell appeared open before her. From the invasion of this horrible mania, the symptoms of consumption began to decline, the febrile heat was diminished, the expectoration restrained, and the whole aspect of the disease was such, that the body appeared to grow more healthy just in proportion as the mental powers became more injured. A few days after the madness disappeared, the phthisical symptoms returned, and, in about three months, the patient expired. It has occurred to me, more than once, to see similar cases ; and I more particularly remember one, where, during three months, the return of the maniacal symptoms was accompanied by an entire suppression of the expectoration, when a new vomica appeared to give way, and the patient's mind became clear and collected, without a trace of the delusion which had previously obscured it. Frank relates a case where the incidents occurred inversely. A lady, predisposed hereditarily to mania, presented all the symptoms of mental derangement, accompanied by sadness, and disgust for life—haemoptysis ensued, and, at the same time, the intellectual trouble ceased. The two diseases succeeded one another a second time, and the patient was completely cured.

“ I am acquainted,” says Guislain, “ with a lady, æt. twenty-one, who, at the age of eighteen, experienced all the symptoms of phthisis, which proceeded rapidly. She had, from her form, a predisposition to that malady. She married, and became pregnant; but the symptoms of pulmonary consumption still continued. Soon after her delivery, mental derangement appeared, and all the symptoms of ulceration of the lungs subsided. The character of her mental disease was, chimerical melancholy. This state has continued two years, and there is not the slightest amelioration in the mental disease; for the other disease, the functions of the lungs, and other viscera, are healthy. One sister of this lady died of phthisis; another is actually in confinement.”— Notwithstanding these numerous and well-authenticated instances of a peculiar connexion between diseases of the brain and lungs, such examples must only be looked upon as very remarkable deviations from general rules, because I apprehend that very many cases of death by phthisis occur in lunatics, without the smallest alteration in the hallucinations of the patient. Esquirol noticed above sixty cases of pulmonary disease in the bodies of melancholic patients; and he nowhere observes that the progress of the one disease had been suspended by that of the other. There is, probably, some peculiarity in the circulation in the cases we have noticed, a

medical problem well worthy of solution : from the future attention of physicians, the careful observation of such phenomena may lead to vast improvements in our art—improvements which the mere observation of alterations of structure, explicable often on mechanical causes, will never supply.

It is well known to physicians, that acute rheumatism, and principally that form which attacks the joints, is transferred often to an internal organ, and sometimes this organ is the brain. It has not occurred to me to see any such example. At all events, the peculiar process which occurs is hidden from our view ; but the fact rests on undoubted testimony. The converse, likewise, of the case sometimes occurs, maniacal disease disappearing under the occurrences of inflammation of the joints. The following is a remarkable case of this fact. “ V.,* aged twenty-eight years, a robust man, very passionate, and of the greatest punctuality in the transaction of his business, became maniacal from grief. His wife, to whom he had been recently married, died, after a severe illness. In addition to his affliction, he felt her loss, as having assisted him materially in the transactions of his commerce ; and it ended by his losing his senses.

* From M. Guislain.

His delirium became furious ; he was obliged to be tied to the bed ; there were constipation and very quick pulse, but his appetite was as usual ; leeches were applied to the temples. These evacuations produced no remarkable change in his mind ; the fury diminished ; but the patient continued deprived of reason. This state had continued seven weeks, when, suddenly, the maniac complained of acute pain in the joint of the foot, and from this time his mind became more composed ; the feet swelled, and the patient suffered extreme pain. A few days afterwards, the mental disease was completely cured. Since that period the individual has never suffered the smallest derangement of mind, and his bodily health has likewise been good.”

Occasionally the mind is relieved by the appearance of a flux, as diarrhoea or haemorrhoids ; and the occurrence of cutaneous eruptions has also been said to be beneficial.

All these cases are, unhappily, few, compared with those in which no benefit is received from any such interposition of friendly disease. I proceed, then, to consider what art—strictly speaking, the exhibition of medicine, or remedies powerfully efficacious in other diseases, can do.

III.

THE application of medicine to mental disease must, of course, be directed, in the first instance, to the nature of the attack. It will become necessary carefully to inquire whether the brain is primarily or secondarily affected, and whether such affection is or is not connected with organic lesion. The physical causes must be carefully separated from the moral, and due weight assigned to each. If, on accurate inquiry, the patient has been exposed to causes sufficient to produce inflammation of the brain, and if redness of the countenance, injection of the conjunctiva, and heat of skin, very early in the disease, point out increased vascular action, with increased power, antiphlogistic remedies, with blood-letting, principally from the jugular vein, are to be employed ; and in such cases, and probably only in such cases, mercury may be employed, to affect the system ; such cases will often recover. In the summer of 1827, I had occasion to visit a gentleman, aged thirty, whom I found in the following condition. He was lying on a sofa, in a state of great agitation, and complaining that he had committed

some great crime, and was the object of a conspiracy. He complained of pain in the head, and would not permit me to feel the temperature of it. The pulse was quick and oppressed, and I recommended that he should lose blood. The first bleeding was borne very ill, but the second, to the amount of sixteen ounces, was attended with some relief. Cold was applied frequently to the head, and blood abstracted by cupping every day for several days, during which time he took calomel every four hours. As the mercury began to affect the mouth, a visible change in the mental malady came on ; this gradually increased in the most favourable manner, and the patient entirely recovered, nor has he suffered the smallest relapse since that time. I had the advantage of the assistance of Mr. Tupper in this case. This case is only, however, an example of a few, where the mental disease is going on in consequence of increased vascular action ; in the great majority of cases the functions of the brain, in mental derangement, are increased in force, while the circulation is depressed, extremely quick and feeble, and the action of the heart gives way at the smallest abstraction of blood ; and yet these are often attended with raving delirium, great increase of muscular force, and are, in fact, what are termed *high* cases. The consequence of such practice, is either the more frequent returns of the high stage, or the patient sinks into one approaching idiocy.

“ At the admission,” says Pinel, “ of any lunatic into the hospital, great care is taken to interrogate the relations on the subject of blood-letting; and the question is asked, whether it has been employed, and what was the result? The replies the most constantly made attest that the condition of the lunatic has constantly become worse immediately after bleeding. I think I ought not to omit a curious fact, which occurred in the year 1813. Two young persons, of a similar age and temperament, arrived the same day; one of them had not been bled, and her cure was effected in two months; a copious bleeding having been exhibited to the other, she was reduced to a kind of idiocy, and did not recover the use of speech until near the fifth month; her complete re-establishment was not effected until nine months. We saw afterwards a singular example of a melancholic patient, who had been bled five times from the foot and three times from the jugular vein, and had fallen afterwards into such a state of stupor and debility, that she passed several days without taking any nourishment.” Dr. Haslam informs us, that it is only in the very early stages of the disease that blood-letting is useful; and then he prefers cupping. It is also very remarkable, that, according to his testimony, the appearance of the buffy coat on the blood, generally considered to justify such practice, has been found often absent in cases

of lunacy where venesection has been used. In more than two hundred patients, male and female, who were let blood by venesection, there were only six whose blood could be termed sizy. The experience of Pinel is very decided against this practice.

The experience of any individual, however zealous, must be extremely limited; and I do not venture, therefore, to detain the College with the detail of my personal inquiries. I have endeavoured to obtain the result of medical practice on a large scale, and for this purpose selected Mr. Warburton's house, the White House on Bethnal Green, containing 400 patients, and where the skill of Mr. Beverley, the superintendent, and Mr. Phillips, the resident surgeon, emboldens me to offer to the consideration of the College facts which have resulted from their extensive and assiduous observation, which I could never hope to have obtained from any single private source. It is to these gentlemen I am indebted for the principal observations I am enabled to relate.

Messrs. Beverley and Phillips state the following as the result of their observations on this subject:—

• The number of patients admitted with vas-

cular excitement, requiring blood-letting, are very few indeed ; we seldom or ever use the lancet in cases of excitement, if there is no evident effect upon the brain from increased arterial action, so as to lead us to fear an approaching attack of apoplexy or paralysis. The reason we do not use the lancet in cases without any such symptoms existing of disease going on in the brain, is, that we have done so in several instances, and the result was not favourable ; the patient became reduced from the loss of blood, and the excitement not abated ; the powers of the constitution gave way, the tongue became typhoid, and the patient sank into a state of collapse, and died.”

As the result, then, of experience in cases of excitement, I presume that these arise from increased nervous energy, not depending on increased action of the heart and arteries, but on increased sensibility of the brain itself, and that blood-letting is not found useful.

Hence physicians have been under the necessity of seeking for means to allay the inordinately increased sensibility principally occurring in that division of insanity termed dementia. These remedies are various. I shall commence with cold, which may be administered in three ways—in the form of ice, in the shower-bath, and

in a column of water, graduated according to the strength of the patient, and termed the "douche," a French word, for which I know of no corresponding one in our language. Of ice to the head, not only in order to diminish vascular excitement, but also to produce a really sedative effect, a diminution of intensity of sensibility of the brain itself, I can speak with some confidence. In the epidemic typhus fever, which has recently raged among the lower classes in this town, and which has been of a marked and peculiar character, with scarcely any, if any, stage of excitement, the application of ice in the low maniacal delirium which accompanied it was attended with the happiest effects, and in more than one case appeared to be the principal means of cure; the patient sleeping quietly for hours under an ice cap, who, previously to the use of the remedy, had passed the night in low muttering delirium, or in the constant endeavour to leave his bed. This remedy appeared to me to be useful exactly in proportion as the delirium assumed the maniacal character. The torpor produced by extreme cold may convey a tolerably accurate idea of the modification which the extreme sensibility of the brain may receive from this remedy. The effect which pouring cold water on the head, in cases of affection of the brain with increased vascular action, produces, may be illustrated by the following very remark-

able case, which I attended with my friend, Dr. Roupell, physician to the Seaman's Hospital. A young medical man was attacked with symptoms of inflammation of the brain, while pursuing with great ardour his professional studies ; and, being a medical man, he was, of all other persons, the most difficult to treat. Notwithstanding the intense pain in his head, and his quick and frequent pulse, he resisted remedies. Venesection he would not submit to, leeches he had an objection to, calomel he thought produced inflammation and ulceration of the mucous membrane of the intestinal canal ;— it was proposed to pour cold water from a pitcher over his head ; the consequence was diminution of pain, quiet sleep, and, in fact, so beneficial an effect, that the patient himself frequently called for a repetition of the remedy. I saw this patient several times, and the impression on my mind was, that to this remedy, and to this alone, he owed his life in that attack.

The shower bath appears to have a very similar effect in cases of early excitement, and I am enabled to quote a case of its benefit in mania, from the testimony of the gentlemen to whom I have alluded.

“ We have found, in some cases, the shower-bath of great service ; but it appears to us, from the experience we have had of it, that it is more

beneficial in cases of a very violent nature, with increased vascular excitement, as we have given it a trial in cases of various descriptions, and in some without the slightest benefit."

" There was a case admitted into this Establishment, evidently a case that was completely cured by the use of it. A gentleman, aged 30, small, and of a light complexion, who had been studying hard, and constantly confined to one room, was attacked with furious mania; thought he had found out perpetual motion, and that he could make the sun stand still. Pulse very quick, 120, and small; pupils contracted; imagined he could reach any thing he saw, and grasped at them; incessantly talking; tongue furred and dry. We ordered him to go into the shower-bath. His extreme violence put us on our guard, that we got six keepers to take him there. We persuaded him, with much difficulty, to go in, by saying it was only a sentry-box. On hearing that, he immediately went; the door was closed and secured; the shock was so unexpected, that he screamed, and held his breath for a short time after the shock was over; then gasped, and knocked the sides and the door into pieces, and stepped out; but was immediately secured, rubbed dry, and put to bed. He had a little refreshing sleep during the night. In the morning he vowed vengeance against the doctors for murdering him.

We could not prevail upon him this day to go into the bath, which obliged us to confine and carry him there. He bore the shock better; was taken out, rubbed, and put to bed. Slept better; the tongue appeared cleaner, and he was not so violent. Bowels open; he begged to be released from confinement, which was complied with. He took a little exercise; we put him in the shower-bath almost without any difficulty; sleep returned; gave him a dose of calomel and colocynth; more rational; he inquired what had been the matter; thought he had been asleep, and in the evening begged himself to go into the bath and have more medicine. From that time he became tranquil, took mild aperients, and was discharged well in a fortnight from the date of his admission.”

“ We have had several cases, nearly of the same nature, where the shower-bath in its results proved invaluable.”

It is clear, therefore, from this statement, that it is to cases of dementia that it is applicable. I am not aware whether the douche is much employed in this country; in the houses where I have inquired, I believe not. Pinel speaks of it in high terms; and the power of graduation, so as not to give too violent a shock, allows of its employment in private.

The patient is put into the shower-bath, and I

give the detail of the process in the words of the author himself, M. Pinel :—

“ A happy combination of the douche with the bath adds greatly to its efficacy, and prevents even the smallest inconvenience which might arise from it. To each bath, and directly over the head of the maniac, is adapted a tube, so constructed as to let water fall three feet in height ; the stream of water being proportioned to the end proposed, and graduated according to the symptoms ; but in general the stream is very small. It is not until nearly the end of the bath, and during a few minutes, that the douche is administered ; when the circulation of the blood has been drawn to the surface of the body, and is to be diminished towards the head by the cold produced. The douche is omitted as the disease begins to decline, and during the convalescence, but is resumed at the approach of an accession of mania, or when it has already broken forth. If the appearance of excitement be very moderate, the practice is confined to letting, drop by drop, cold water fall upon the head, which determines a moderate degree of cold, both by the impression of the liquid and the evaporation which takes place.”

The cold plunging bath, formerly so much recommended by Van Helmont, and in which the patient was half drowned, in the hope that this

short interval between life and death would put an end to the chain of perverted ideas, and that, with new life, the patient would recover new senses, is, as it would appear, not now employed, at least in this country.

As the use of cold in various forms appears to be productive, under proper management, of the greatest advantage in cases of mania, a corresponding good effect has been said often to be observed in the employment of the warm bath in cases of melancholia. I was informed at Charenton, in France, and the Quaker's retreat, near York, that more marked advantage was derived from the employment of the warm bath in cases of melancholy than from any known remedy in diseases of the mind; and Mr. Tuke states this opinion before the Committee of the House of Commons:—"The warm bath (he says) is used more medicinally than the cold bath; and it has been observed that the warm bath has been found very beneficial, particularly in female cases."—Dr. Guislain gives his very important testimony to the benefit of it, especially in cases where lunatics refuse nourishment. Like all other remedies, it is probably often of benefit, and occasionally fails. It appears likely to be more frequently advantageous when employed among foreigners, because from infancy warm baths are used, both as remedies and luxuries, and in either

view may become more necessary than to persons who have never been in the habit of employing them.

Producing discharges from the scalp, by means of blistering substances or escharotics, has been strongly recommended in chronic cases, both of mania and melancholy; and one of the greatest names which ever adorned the profession of physic has been brought forward in approbation of this practice. Dr. Jenner believed that he had cured cases of insanity by producing pustules on the scalp. A case was related to me, on good authority, where mania after continued fever was cured by this means twice repeated, the symptoms of mania entirely disappearing with the second crop of pustules. I have, of course, endeavoured to inquire whether such beneficial effects are at all frequent. "We have given this a trial, (say Messrs. Beverley and Phillips) more particularly with the tartar emetic ointment, and with, we thought, some advantage, in a few cases, but we found, from the constant restlessness of the patient, erysipelas came on from the friction against the pillow, so that we were obliged to abandon it. We afterwards tried it in several cases over the biceps humeri muscle with, I think, more benefit than on the head: these were cases of a very violent nature, stout robust habits, and who were, for

the most part, subject to periodical attacks. The use of it had evidently the effect of making the paroxysms of much shorter duration. We have also used blisters to the inside of the thighs, and calves of the legs, with advantage." The employment of tartar emetic internally may be directed on two principles, first to diminish the action of the heart and arteries, where these are excited by keeping the patient in a constant state of nausea ; secondly, as an emetic in melancholy, where full and repeated vomiting is of great service in producing a more rapid circulation in the vessels of the abdomen, and relieving the viscera, already gorged with blood. The former application of the remedy appears most applicable to mania ; the second to monomania, or melancholy. "Tartar emetic, in doses of one or two grains, given internally every hour, is worth noticing in patients who are subject to violent paroxysms, particularly those who have increased vascular excitement, with great restlessness. The patient generally complains of nausea without vomiting, becomes languid and quiet, rests better, appetite improves, and in a few days is trusted out of confinement."

In addition to these means of diminishing sensibility and irritability, others have been sought for from the class of sedative medicine, and of course from the use of the greatest blessing ever

accorded to mankind — opium. The opinions with regard to the use of opium in mania are very various, but may, I think, easily be explained. Where vascular excitement exists, together with increased sensibility of the brain, the restlessness is increased by the administration of opium ; where perverted perception arises from disorder of the functions of the abdominal viscera, the constipating effect of this medicine, and the manner in which it acts to diminish all the secretions, obviously renders it hurtful ; and it must be added, that in some constitutions it is poison. Hence it is far from generally useful even in the cases in which it is indicated ; and as it is often the case that physicians neglect medicines (after a time) which do not entirely fulfil their expectations, so occasionally this medicine has been unduly estimated, and immediately afterwards, as improperly neglected. In some instances mistaken pathology has lent its aid to undervalue the medicine, and one is forced occasionally to listen to theoretic doubts about its efficacy in cases of great and urgent irritability, from the prevalent opinion that all disease arises from inflammation, acute or subacute, and the corresponding error that opium necessarily occasions congestion in the brain. There is no question that where opium is not contra-indicated from peculiarity in the individual, or the presence of another disease to which it is ill-adapted, it is

of all others the remedy to diminish the sensibility and irritability of the system, to make the wretched forget his grief, the ruined his poverty, and even the criminal the mental retribution of his wickedness: and in the same way it often removes from the imagination of the maniac his supposed iniquities. Still partly the real, and partly the theoretical objections to this remedy, have caused physicians to seek for some substitute from the class of sedatives which would exhaust that increased sensibility which magnifies a hundred fold the objects presented to it.

It is now some years since the French chemists announced to the world that opium contained two substances, on which its peculiar properties depended. Narcotine, believed to possess the stimulant, and an alkaline substance, united with a peculiar acid, existing in opium under the name of meconate of Morphia, the alkaline body, morphia, being believed to possess all the soothing effects of opium without its stimulant properties. The morphia was found to unite in preference with the acetic acid, and under this form of acetate of morphia to be more soluble in water. It is remarkable that the combination of opium with vinegar has been particularly approved of by the celebrated Van Swieten* for

* Van Swieten says, that an accidental case first brought into notice the efficacy of this combination. A girl, who was maniacal, swallowed by mistake a scruple of opium mixed with vinegar: this mistake produced her cure.

the cure of this disease, and that vinegar, for what reason I cannot divine, has been considered very efficacious in the treatment of mania. Since the discovery of the French chemists, morphia has been very much employed; and if I may believe my own observation, and that of persons of very extensive experience in maniacal diseases, with most complete success. I have repeatedly administered it in disease where opium was ineffectual, from the headache and vomiting which accompanies its use, with the most decided benefit. I subjoin the following case, which recently occurred, and which proves the benefit of this medicine:—

A gentleman was attacked, some weeks after a most severe cough and cold, with great difficulty of breathing, attended with the impossibility of lying down at night, together with intermitting pulse and swelling of the legs, the heart and great vessels having become enlarged and dilated after the inflammation. The principal inconvenience in this case arose from the want of sleep, the patient never having been able to lie down during twenty-two nights. Opium, of course, was resorted to, and in very large doses, but the distress produced was so great that the patient preferred his sleepless nights to the dreams and scanty rest produced by this means. The patient came to London, and I recommended him the acetate of morphia, in the dose of three-

quarters of a grain. He slept well, and has repeated the medicine for several weeks, without its having once failed of the most complete success.

But it is to the subject of mania that this applies, and I have it in my power to lay before the College the most convincing proof of the efficacy of this medicine, an efficacy which in my mind renders it invaluable, and which I should not venture to praise so strongly had it not been corroborated by the extensive experience of the gentleman alluded to.

“ We have found the acetate of morphia useful both in the excited and the low form of insanity. We have also found it useful in cases of fixed delusions, but not of any great standing, and more useful in the low than the excited form of the disease. Of five cases of melancholy, three got well ; the remaining two are certainly improving under the use of this medicine. Of five cases of excitement, two were discharged cured ; one remains much improved ; two received no benefit. It is necessary to observe that we have used this medicine in several cases without taking notes, and the result was similar to the two cases mentioned, that is, without benefit. It appeared to us that morphia did not produce the same good effect in excited as in other cases, unless

there was an occasional interval of reason. In the cases mentioned we have commenced with a fourth, and have not found it necessary to exceed half a grain. At present we have a patient taking half a grain dose every night with decided advantage, and we think the case very interesting, and proving the extraordinary effect of this medicine in cases of melancholy. A woman, of the age of 36, the mother of four children, was attacked with depression of spirits while pregnant of her last child. She did not feel the attack before she quickened, but immediately after she had a strong desire to destroy herself and children. This continued during pregnancy. After she was delivered she became worse, and attempted to commit suicide several times, and described her feelings, which is not common in such cases. She continued in this state, not fit to be trusted without a strict watch. She was sent here about two years ago; and what is extraordinary in her case is, that about noon all the feelings of desire of self-destruction left her. This occurred within the last three months, from which time they have remained the whole of the day. Various means were tried without effect. Our first idea, from the regularity of the attack, was to treat her as an intermittent, which failed. About a fortnight ago we gave her the morphia, beginning with a fourth of a grain, and gradually increasing it to half a grain: after taking the

second dose, one-third of a grain, she slept all night ; in the morning was cheerful, without feeling the propensity to destroy herself. The third day she had a return, which lasted until noon ; the dose was then increased to half a grain. The fourth morning she had not any return, and continued well until the fifth day after the half-grain dose was given, when she had a return from five o'clock in the morning until nine, a paroxysm three hours shorter than any of the preceding. She is now free from any desire of destroying herself."

The following is a case of the excited kind, in which this remedy was employed with advantage :—

" A. R. æt. 36, was admitted in February 1831, in a very high state of nervous excitement ; she was a widow, and mother of four children. When admitted she was much excited, and constantly talking. Tongue dry ; pulse very quick ; skin moist. She was excited to such a degree that she tore the jacket and clothes to ribbons ; refused her food ; and would swallow nothing without force. She was ordered a pint of porter daily, with beef-tea and arrow-root. This diet was considered necessary, because if so much excitement continued without support she would fall into a state of collapse, and die. All our

efforts were unavailing in giving her food. We determined to try the morphia. The first night it had not the least effect ; she was noisy, screaming until morning ; on the following day refused her food, and the excitement was unabated ; we got the porter and arrow-root swallowed with some difficulty ; the morphia was increased to half a grain ; did not make any noise during the night, and appeared to be drowsy in the morning ; but when she was spoken to answered in a very incoherent way, and the excitement continued ; the porter and beef-tea was given with less trouble ; the medicine repeated ; slept well during the night ; appeared, on questioning her in the morning, to have a slight return of reason, such as to inquire where she was ; took her food better ; tongue moist ; pulse not so quick, and bowels open. Ordered two pints of porter, beef-tea, and arrow-root, as usual. Medicine repeated at night ; slept very well ; more rational ; began to cry ; took her food much better ; drank the porter, and appeared to relish it ; the medicine was repeated every night until 6th of March, when she appeared perfectly well ; the morphia was discontinued ; she employed herself, and was discharged 14th April cured*.”

* On inquiry, I find that the good effects of morphia still continue in cases in the White House. The muriate of morphia is now preferred, and is said to produce less nausea than the acetate.—Dose, gr. $\frac{1}{4}$.

The extract of the *hyoscyamus niger*, given in full doses, enjoys likewise on the continent of Europe a great reputation: it is the sedative which is preferred, and the fact of its being a mild purgative, has caused its employment by many practitioners in this country. It is believed to be less stimulating than opium; perhaps it is so; I am sure it is far less effectual as a sedative. The only English physician of great reputation who has spoken of its efficacy in diminishing the excitement of the brain in mania is Dr. Fothergill, who was of opinion that he had cured puerperal insanity by this medicine; the dose was five grains, three or four times daily.

The most powerful of all the class of vegetable sedatives is undoubtedly the *belladonna*. It is not to be wondered at, therefore, that it has been recommended for diminishing the sensibility and irritability of the brain in mania: it is not an opiate, but diminishes pain. This is the best explanation I can give of its effect. I have used it extensively in St. George's Hospital; and, as far as my practice would permit, in private life, and often with the most marked benefit. The following is one of the cases in which its alleviating powers were best observed:—A general officer was attacked, about fourteen years ago, with the painful affection of the second branch

of the fifth pair of nerves—tic douloureux. He underwent various remedies from the recommendation of the most celebrated physicians in London. The disease yielded to very large doses of belladonna, and it never reappeared for ten years. At the expiration of this time he had an apoplectic seizure, which left paralysis of the right side, very imperfect condition of speech, and frequent convulsive and painful affections of the nerves, sometimes choking, and at other times startings of the nerves of the affected limb, with occasionally the return of the tic douloureux. It is impossible to conceive more acute pain than is experienced by the patient at these times. He always (and I have witnessed at least ten such paroxysms) finds relief in the extract of belladonna. Half a grain is administered every four hours; and always when the third dose has had time to operate, the pains and spasmodic twitches disappear. It might be supposed that the pain terminated of itself, or that the spasmodic affection ceased naturally at this time; but, distressed at the weak state in which the belladonna leaves him, the patient has once or twice refused to take it, and he has suffered intense pain much longer than he otherwise would have done, being obliged to resort to the remedy at last.

Greding speaks highly of this medicine in epilepsy; and in one or two cases in the hospital

it has appeared to have rendered the intervals much longer, but I cannot lay claim to a single cure. It appears to me well worth the trial of physicians in mania, especially that which arises from moral causes, and is attended with pain and increased sensibility of the brain.

Various other substances from the class of sedatives have been adopted and relinquished alternately. The most powerful sedative with which I am acquainted—hydrocyanic acid, has not, I believe, been used in this country*. The unhappy consequences which followed its exhibition in Paris would deter physicians from any but the most cautious experiments with this medicine. It is, however, in my opinion, from this class of medicines that the greatest improvement will be derived in the treatment of disease of the mind. It requires that practical physicians should turn their attention to it; first discarding the idea which is hostile to all improvement—either that mania is incurable, or that it always, or even most frequently, depends on organic disease of the brain.

There is another powerful medicine whose

* Since writing the above, I learn that hydrocyanic acid has been employed by the late eminent Dr. Alderson, of Hull; and on the authority of Dr. Burrows, I learn by Dr. Balmanno, of Glasgow—it is said, with advantage.

efficacy cannot be explained in our present state of science—arsenic. It appears to alter the sensibility and irritability of the brain, and has long been known as very efficacious in intermittent diseases. I have used it several times, with great benefit, in cases of chronic pain in the head, trembling and sleeplessness, nearly allied to mania. A woman, æt 40, (servant to a lady in the Regent's Park,) was attacked with constant pain in the head, confusion, and giddiness, attended at times with loud noises, which she described like breaking stones; at other times images presented themselves to her mind, and her nights were entirely sleepless; pulse quick and weak. This condition continued for months, during which time I employed every means in my power for her relief; at length I resorted to the employment of arsenic. The patient took ten minims of the liquor arsenicalis twice daily, subsequently increased to the same quantity three times in the day. In about a week very great improvement had taken place; the pains had diminished, and the nights were tranquil. In a fortnight her ailments entirely left her.

The next was the case of John Graham, æt 30, admitted into St. George's Hospital, under my care, November 24th, 1830. The report on admission was as follows:— Ill since June last with pain in the forehead, diverging to each side, very

excruciating ; and reported to feel as if the head was forced or burst open. The pains are worse at night, so as entirely to prevent sleep. The pupils are dilated, and the conjunctivæ injected with blood ; sense of smell increased in acuteness ; bowels constipated ; pulse 100, very weak ; skin cold.

The bowels were ordered to be kept open, and sedative and antispasmodic medicines were employed without effect ; on the 6th of December he was ordered five minims of liquor arsenicalis twice in the day.

11th.—The pains were reported greatly relieved.

13th.—The pupils contracted naturally ; the pain and pressure in the head nearly gone, except when he lies down.

16th.—The medicine increased to five minims thrice daily : from this time the pains entirely disappeared. He remained in the house a fortnight, to see if any relapse took place, when he was dismissed free from ailment.

It has occurred to me to see several similar cases ; but these, perhaps, are as good examples as I could select of this peculiar effect in the me-

dicine; and I cannot but think it might, in proper hands, be very beneficially employed in some maniacal cases. Although I am quite aware that this medicine is similarly employed by many physicians in practice, yet I cannot learn that it has hitherto been tried in any of the numerous analogous, and more severe cases, which are found in lunatic asylums in this country.

In female cases, and especially those kinds which approach nearest to hysteria, the foetid gums and antispasmodic medicines have been principally used, and there can be no doubt that such means may tend very materially, by proper administration, towards a cure; but of all the diffusible stimulants which have been recommended, camphor has had a peculiar reputation. This was the remedy on which Dr. Perfect relied in the treatment of numerous cases of insanity. In 108 cases he conceives the patient derived essential benefit from it, and he administered it in the solid form. The following is one of these cases:—

Mrs. S. B., a married woman, became melancholic. Her complexion was pale, eyes red, tongue dry, pulse small, hard, and irregular. After bleeding and vomiting, Dr. Perfect ordered two scruples of camphor to be taken morning and evening. An eruption came out after this treatment all over

the body. The catamenia returned; nitre was added to the camphor, and the patient recovered completely.

Purgative medicines have been, from all antiquity, greatly praised in the treatment of mania, and above all, the helleborus niger. In our present state of knowledge there are many purgative medicines far preferable to this, although it is consecrated by centuries of experience. Moderate and frequently-repeated purging appears, as far as I can collect, to be very useful in monomania. One of the most advantageous discoveries in the modern art of medicine, has been the oil of croton, because there is scarcely any condition in which it cannot be administered, and very large doses of other medicines are required to fulfil the indication. I have repeatedly had occasion to administer this medicine in diseases of the brain, after blood-letting, in acute cases and in chronic cases, alternately with sedatives, and with the greatest possible good effect. Dr. Abercrombie affords, likewise, his powerful testimony in favour of the derivative, as well as purgative, effects of this medicine. A drop may advantageously be administered in a little jelly, which covers the acrid taste; when made into pills, it appears to lose, partially, its beneficial effects. Messrs. Beverley and Phillips have afforded me the following information on the curative treatment by purga-

tives in the White House:—"Purgatives are, we think, of the greatest importance. We have not tried long courses of drastic purgatives; we have tried courses of mild purgatives in melancholy with advantage. There appears, almost always, a want of energy in the constitution of melancholic patients; the circulation is languid; the absorbent system sluggish; there is a furred tongue and swelling of the legs,—in those cases we have found a course of laxative medicine, with gentle exercise, of great service. The exercise is generally enforced, as they will not comply without it, frequently requiring two assistants to take them by the arms, and oblige them to walk. The patient's health, by this means, improves, and the mind by other medicine, particularly the morphia, which we have given at this period with advantage."

The oleum terebinthinæ, a medicine combining purgative, anti-spasmodic, and stimulant properties, has been much employed in cases of hysteria, connected with epilepsy; it has been recommended by Dr. Latham, senior, Dr. Thomas Young, and Dr. Percival; and in the latter cases especially, by Dr. Pritchard, of Bristol. Nevertheless, it has never become an ordinary practice. I lately had the opportunity of seeing very decided effects from it, in a case—an out-patient of St. George's Hospital, aet. 15. The

patient had never menstruated, and was in a state very nearly approaching to idiocy, being unable to speak or take notice, except occasionally, when struck with the appearance of some glittering ornament, when she expressed her surprise by remarkable and violent gestures. The pulse was quick and weak; great pain in the head; skin cold. She was ordered two drachms of *ol. terebinth*, and the same quantity of castor oil, every morning, and in about a fortnight she recovered the use of her senses; but she remains in a weakly state of body, and the catamenia have not occurred. She is now able to take steel. I am inclined to think that great benefit may be derived from the employment of this medicine in similar cases, and such are not very uncommon.

The belief that cases of insanity always depend on organic causes, or a state of acute or subacute inflammation of the brain, has not only led to the erroneous treatment of many of these forms of disease, by venesection, but has suggested an antiphlogistic diet. We have, I think, the best evidence from the greatest experience in France and England, of the evil consequent on such practice. M. Pinel draws a terrible picture of the afflicting consequences of the short allowance on which the patients of the Bicêtre were placed in 1796; and it has been seen that a full diet, and even considerable quantities of stimu-

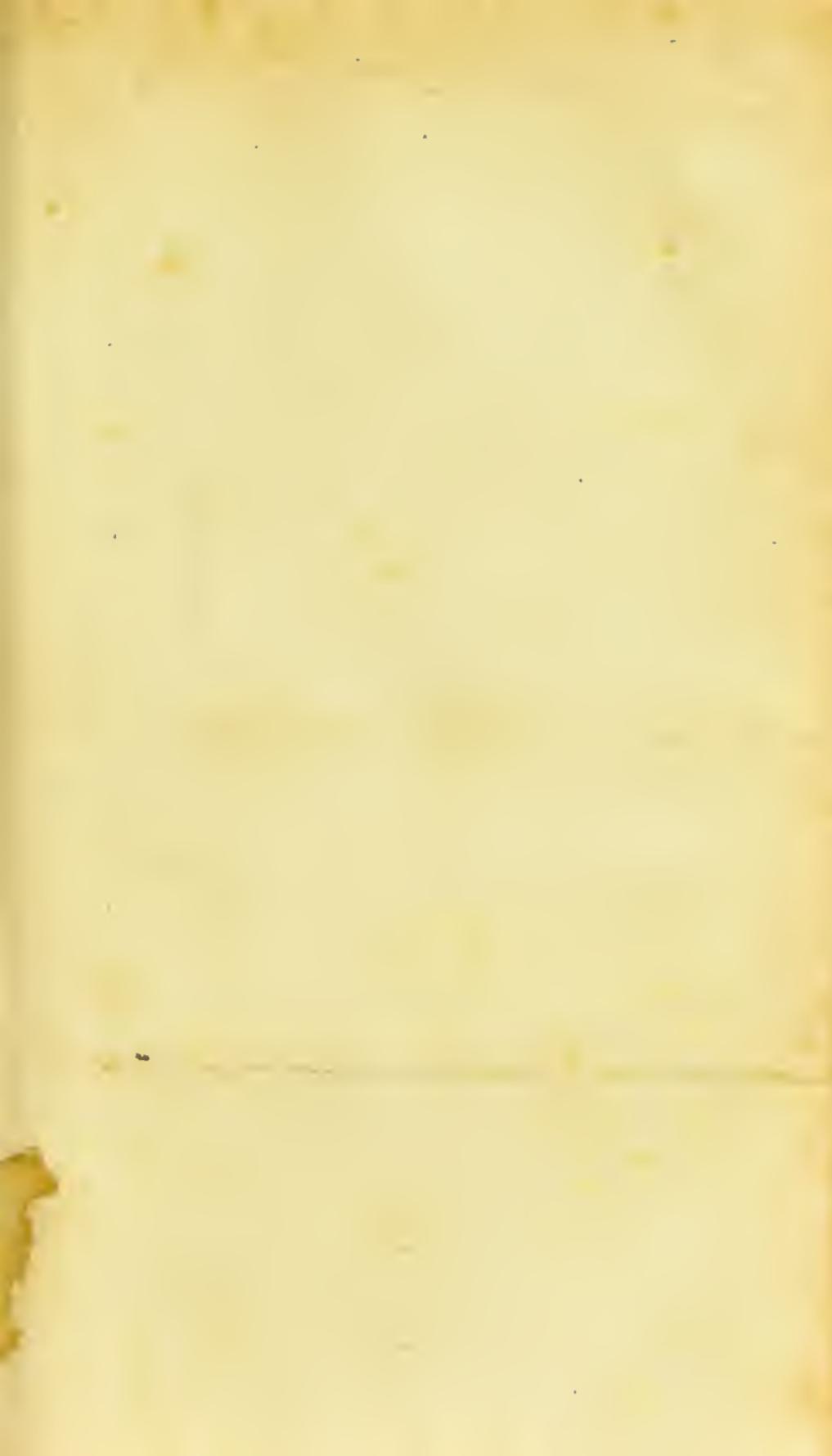
lants, are often productive of the utmost advantage in what are termed high cases. In the cases arising from child-bed, or during nursing, Dr. Gooch has very clearly demonstrated that these occur either in consequence of, or during, an exhausting process, and are relieved by tonic and antispasmodic medicines and restorative diet.

I have now spoken generally of the principal means of cure, from medicine, which may be adapted to mental disease; any improvement in treatment, and consequently any collection of facts, to serve as guides to future observers, must obviously depend on the judgment exercised in discriminating the causes, both moral and physical. The small bleedings, for instance, which would be useful in mania depending on chronic disease of the heart, and steatomatous or bony depositions in the smaller arteries of the brain, would be a fatal error in those frequent cases connected with hysteria; and the large evacuations and antiphlogistic treatment imperatively called for in inflammation of the membranes of the brain, would change mania into furious madness, by increasing the already excited morbid sensibility of the brain and nervous system. I hope, little as I have been able to say upon these subjects, that it is enough to prove that it is to the educated physician, to the man who is engaged in the constant discharge of the duties of his profession, that such cases should be made a

subject of deep importance ; that all his experience should be brought to bear ; that all his faculties and observation should be concentrated in improving this portion of the medical art ; not by studying it exclusively, but in conjunction with the other diseases of the human body, and thus removing a great source of quackery and imposture. The educated physician is too often called upon to stand between the public and its prejudices : this must be done, not by deserting our colours, but by shewing that, with every desire to serve the public, neither rewards nor honours, nor fleeting popularity, can make us lend our countenance even to innocent imposture ; and that that independence, which is the distinguishing mark of an honourable profession, will support us through difficulties, and vindicate the integrity with which we practise that profession. If we carefully investigate disease, and neither resign that interesting and useful study to artful and designing persons, nor suffer ourselves to be overcome by the momentary prejudices of the world, all experience has shewn that medical practitioners so acting have received, and will continue to receive, the respect and homage of society.

THE END.





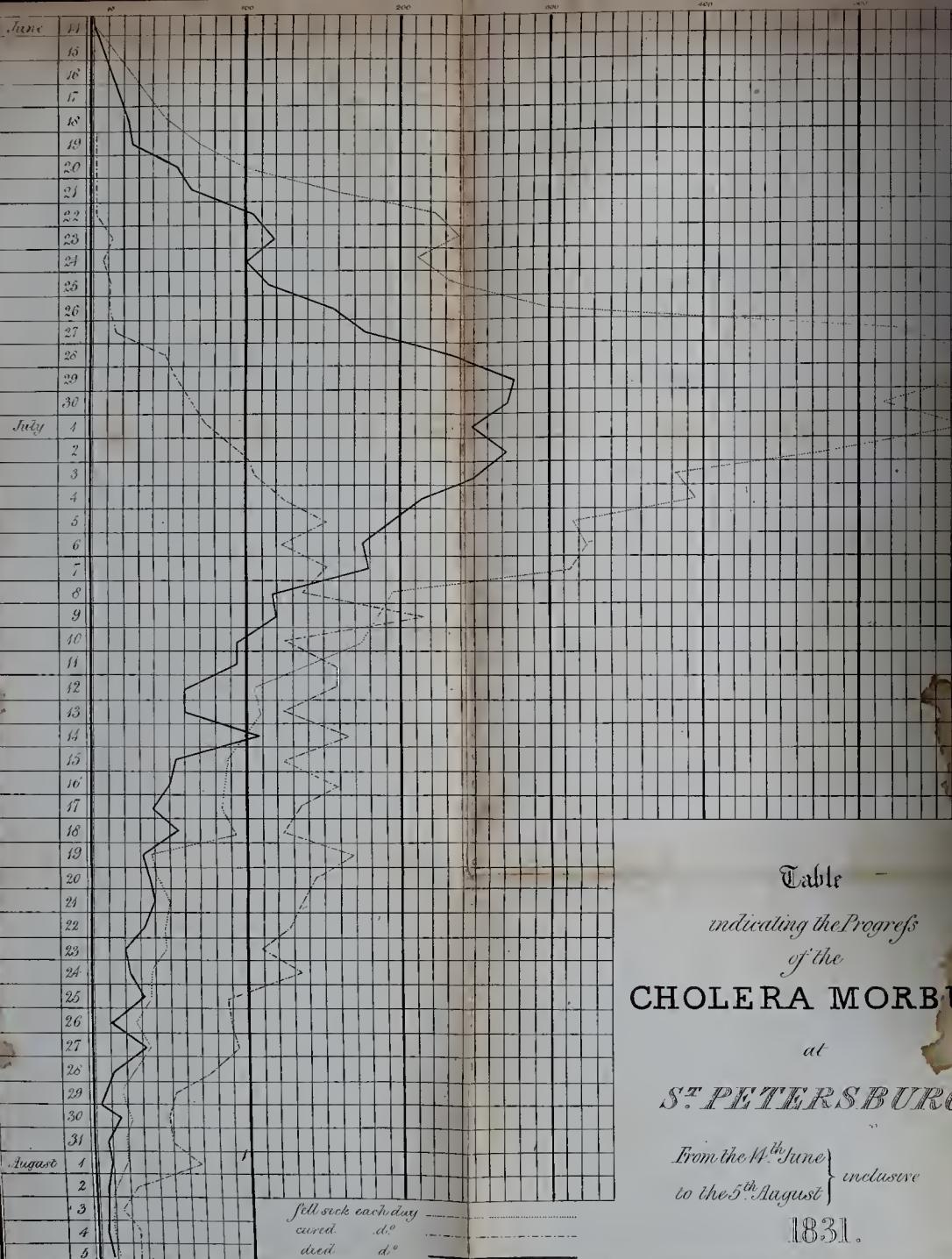


Table —
indicating the Progress
of the
CHOLERA MORBUS

at
ST. PETERSBURG.

From the 14th June }
to the 5th August } inclusive

1831.

(4)

OBSERVATIONS
ON
THE NATURE AND TREATMENT
OF
THE CHOLERA MORBUS,
NOW PREVAILING EPIDEMICALLY IN
ST. PETERSBURG.

BY

GEORGE WILLIAM LEFEVRE, M.D.

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OF THE ROYAL MEDICAL SOCIETY OF EDINBURGH,
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“ Si quid novisti rectius istis,
“ Candidus imperti ; si non, his utere mecum.”
HOR. EPIST. 6.

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PREFACE.

I was appointed in conjunction with several of my colleagues to superintend a large though not very populous district during the prevalence of the late epidemic in St. Petersburg.

I had also to perform duty in rotation at one of the largest temporary hospitals, established during the first ten days after the appearance of the disease, and was subsequently removed to a less considerable establishment in my more immediate neighbourhood.

Towards the decline of the epidemic, when the duties were much less severe or had almost ceased, I received a circular from the inspector of the district, Dr. Markus, who requested me to communicate my observations upon the following subjects.

1st. "Relatively to the invasion, mode of propagation and progress of the disease in my district, specifying particularly the number of cases and deaths, as well as the state, condition, and mode of life of the persons attacked.

2dly. "Relatively to the pre-disposing and occasional causes of the disease.

3dly. "Relatively to its character and symptoms both at its commencement and during its course and decline.

4thly. "Relatively to the contagiousness or non-contagiousness of Cholera, founding my opinion upon positive facts; and more particularly as regarding the attendants of the sick, whether they were attacked with the disease during their attendance.

5thly. "Relatively to the treatment and to the means I found most efficacious during the different periods of the epidemic."

In conformity with this request I drew up the substance of the following statement, transcribing from my journal such observations as I had made for my own instruction, without any idea of being called upon to produce them.

In fulfilling this task, I was induced to

enter more at large into the subject, and as I imagine that the observations of an individual, or rather a comparison between the observations of different individuals during the late malady, cannot be wholly without interest, I have been induced to send the following to England for publication.

Much apology is due for the imperfect state in which these remarks are presented to the public, but I do not offer them as an essay or a treatise, but merely as the results of the experience of an individual.

I wish to invite the attention of the profession to the true nature and seat of the disease, in order that we may arrive at some more rational method of treatment.

I am convinced that this can only be discovered by the joint efforts of the dissector and the chemist, and it will only be by their repeated application to the scalpel and the alembic, that they can hope for success.

With respect to the question of contagion, I require more facts before I can positively make up my mind to say, whether under any circumstances Cholera can be considered contagious.

As regards the present epidemic, such as I have lately witnessed it, I am bound to say that I have no rational grounds for believing it to be so.

This question, however, demands great and impartial consideration, and is in abler hands than mine.

I have dwelt at some length upon the treatment, because I think it is the duty of every medical man to acquaint the public as early as possible with any plan that has appeared to him successful, in however small a degree.

If any thing I have suggested may enable the profession to come nearer to the point of unravelling the intricacies of a disease which threatens to make as much havoc in the west as it has done in the east, my object will be fully answered, and I shall be enabled and gratified to say “*Nec ego frustra.*”

St. Petersburg,

September, 1831.

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OBSERVATIONS ON THE CHOLERA MORBUS.

INVASION AND PROGRESS.

THE progress of the Cholera Morbus through different parts of the Russian Empire is already known: and although its march has not been so satisfactorily accounted for, as could be desired, in order to illustrate the real nature of the disease and its mode of propagation; yet sufficient evidence has been collected, that it has appeared epidemically in most of the great towns in Russia, where, after having raged for a short period violently, it has almost entirely disappeared, or dwindling down to a few isolated cases, has been unnoticed or forgotten, until, consistently with the character of all Epidemics, it has again returned, and though with less violence, has maintained the same character as upon its first appearance.

This has been particularly observed in many parts of the interior, where it first appeared about twelve months ago, and having made great ravages for a short period, left the inhabitants in comparative security, till its re-appearance after some months of absence again plunged them into uncertainty as to the future prevalence of this new and terrific malady.

The identity of this disease with the Indian Cholera, had been fully ascertained before it made its appearance in St. Petersburg. This was decided by the faculty of Moscow—a decision confirmed by the testimony of physicians, who had witnessed it in the East Indies.

Among the most striking features in the propagation of this disorder, is what may be styled its eccentric motion;—and, true to its Eastern character, it presented this feature here, not only in its passage through the country, but even in its dissemination over the different parts of a town which it invaded.

In its progress from Tiflis to Moscow, it was observed to move in a zig-zag direction, rather than in a regular line of march. It would pass by a town which lay immediately in its path, to appear in another, which it must have reached by a very circuitous route.

When it invaded a town, it followed the same

law ; touching at a point to fly off at a tangent, and appear at a widely separated part from that where it first commenced, leaving the intermediate spaces uncontaminated.

Such was observed to be its character when it reached St. Petersburg, where it was first announced officially on the 14th of June, as having appeared in the suburbs.

A few days sufficed for its dissemination over the capital ; and this so widely and so generally, as in most cases to preclude all idea of mere connexion with infected persons being the sole cause of its propagation.

I was myself called to see a case upon the third day of its appearance. The patient resided upon the English Quay, a distance of at least three English miles from the place where it first appeared. She was an old woman of sixty-seven years, who scarcely ever left her room ; she attributed her attack to indigestion, and died in less than twenty-four hours with all the symptoms of inveterate Cholera.

In this respect, therefore, it agrees fully with the description given of it by those physicians who have been conversant with it in India.

“ The disease,” says Dr. Kennedy, “ would sometimes take a complete circle round a vil-

lage, and leaving it untouched pass on, as if it were about wholly to depart from the district. Then after a lapse of weeks, or even months, it would suddenly return, and scarcely reappearing in the parts which had already undergone its ravages, would nearly depopulate the spot that had so lately congratulated itself upon its escape."

This whole passage is applicable to St. Petersburg at the present moment; for though last autumn we were surrounded on all sides by the Cholera, still we escaped during the winter and succeeding spring. Seven months had elapsed since its appearance in places not far distant from the capital, and we began to think that the Imperial City would escape its ravages.

"There is a striking resemblance," observes Dr. Kennedy, "between the propagation of the Plague, as described by Procopius, and that of Cholera.

"It always spread from the sea coast to the inland country; the places which had escaped the fury of its first passage, were alone exposed to the contagion the second year."

People resumed their usual avocations and their ordinary diet; they began to regret the

privations they had voluntarily undergone in abstaining from various articles of food which they considered dangerous.

The profusion of fruit which pours into Petersburg from all the southern provinces, but particularly the grapes and water-melons from Astracan, had the preceding season been allowed to rot in the hampers in which they were imported.

The supposed preservative means were now generally laid aside, and the houses were no longer redolent with the fumes of chlore, tar, and juniper, which poisoned the antechambers.

The Family Receipt Book was no longer conned over by day and meditated upon by night, and Buchan and Thomas had already been replaced by Fairy Tales and Travels in the East.

The medicine chests and prescriptions of each confidential physician were altogether discarded; castor oil and opium fell again to a moderate price; and, indeed, the confidence in the faculty was much shaken, when it was ascertained that the means employed by the common people were equally successful with those adopted by the profession itself.

Some few, however, continued to use the same precautions as heretofore, and even took medicine by anticipation. Some even fell victims to such an absurdity. In the midst, however, of this almost general oblivion of the past, the Hydra-headed monster was upon his route; for the evil day had only been postponed.

The Journals announced publicly the invasion of the Malady; but the panic was by no means so great as upon the news of its having reached Moscow the preceding autumn; for the minds of the people had already been accustomed to the name of Cholera, and it had lost half its terrors.

The friends to the doctrine of contagion saw immediately the full proofs of their belief realized, because they found the disease imported by a bargeman, in an infected barge, and from an infected station. Nothing could be more evident, nothing more conclusive.

Those of a contrary opinion disputed the point, and with some degree of plausibility. If the disease had been so imported, why did not the man fall ill before his arrival at St. Petersburg?

How was it that none of his companions, exposed to the same causes, should have been attacked also?

When, upon inquiry, it was found that within the space of three days the disease broke out in a dozen parts of the town widely separated from each other, the supporters of contagion awaited further evidence, and the anticontagionists increased with the increase of the disease.

Towards the latter end of the preceding autumn, the government, aided by voluntary contributions from the nobility and merchants, had established additional hospitals in various parts of the town. No pains nor expense had been spared to render them fit for the reception of the sick, and they were not merely provided with necessaries, but every luxury was supplied which ingenuity could invent.

The zeal of many of the nobility to contribute, not only by pecuniary donations, but by the example of their presence, to encourage and provide for the sufferers, was without bounds.

I am personally acquainted with a nobleman, who, upon hearing of the Cholera having reached Petersburg, left his country seat at a long distance from the capital, hurried up to town, and was to be found from morning till night acting

the good Samaritan, with as pure and disinterested intentions as his prototype of old.

It is true he was a non-contagionist, and feared not infection, and this confidence adds much weight to the advantages of the doctrine, inasmuch as it stimulates the opulent to exert themselves upon such occasions with proper philanthropic feelings.

It could only have arisen from the fear of contagion, so much insisted upon by some few medical men, that many deserted their posts in the hour of danger, fled from the city in the day of her trouble, and shut their doors to all who had communication with her.

It is not intended to attach blame to any individual, or to assert that the greater part were not influenced by motives equally laudable; but fear is a great barrier to charitable exertions, and though to be lamented, is seldom to be overcome.

Such as fully believed in the doctrine of contagion could not reconcile it to their consciences to expose their families to its influence, and as such persons are known to be more susceptible of morbid impressions, so they would have been unjustifiable in exposing themselves; but we merely wish to insinuate that fatalism

may be turned to good account, and that scepticism and unbelief are of use in *worldly* affairs.

Upon the appearance of the Cholera in Moscow, the emperor himself hurried off to that capital, and contributed much by his presence to calm the public mind. His presence here was not less valuable upon this occasion, as from misunderstanding on the one hand, and evil disposition on the other, every thing contributed to excite popular commotion ; but as soon as his majesty was apprised of the proceedings, he hastened to town from his country residence, and his presence not only quelled all temporary commotions, but disorder entirely ceased, and was not again renewed.

The people, not aware of its nature and little versed in its history, began to be sceptical concerning this singular disease.

The suddenness of its attack, and more particularly, its rapid termination, with the strange appearances caused by its ravages on the human frame, created suspicions of an unpleasant nature.

The disease was attributed by the people to poison, and nothing apparently could be more authentic than the reports that were spread of miscreants taken in the act of putting poisonous

drugs into the food and drink of the common people.

How far these opinions were founded in truth it is foreign to my object to investigate, except inasmuch as considerable influence was produced on the public mind by this unfortunate belief; an influence which soon proved an insurmountable obstacle to affording assistance to many who were attacked.

As for myself, I met with no direct proof of poison having been administered.

Such popular commotions are by no means uncommon in the history of epidemics; nor is the suspicion entertained of poisoning so much to be wondered at, when in England, and in an enlightened class of society, a man was publicly tried for having poisoned his wife, and was only acquitted upon the evidence of four physicians, who testified that she died of the Cholera Morbus.*

Whenever strict quarantines are *attempted*, for they will never be strictly observed, as we see by the daily accounts we have of the progress of the disease, there will be temporary discontent; for as the working of a machine can never be perfect, unless all the parts move in harmony

* Kennedy's Notes on Cholera.

with each other, so in these cases, the best intentions will be frustrated by the subordinate agents being unfit for the service for which they were selected ; thus becoming not merely impediments to the working of the whole, but giving it altogether a different and opposite direction.

For the sake of convenience the town was divided into different sections, and to each was appointed a medical inspector and a proportionate number of assistants ; and upon an average, every physician had from forty-five to fifty houses to attend in case of need, and moreover to perform the duty of a hospital during a stated number of hours every day.

Such were the orders delivered, and such the arrangements made, even previous to the invasion of the malady.

SYMPTOMS OF CHOLERA.

THE variety of shapes under which this disease presents itself is so great, that it is impossible to specify all the symptoms which characterise its attacks.

Sydenham, in speaking of the *Cholera Morbus* in 1669, observes, "Malum ipsum facile cognoscitur," but he is evidently speaking of a totally different disease; and in spite of the opinions of some writers, who assert the Indian Cholera to be an aggravated form of the European malady, it is evident that the present epidemic differs *toto cælo* from that described by the old Nosologists, if, perhaps, we except Sauvages, who speaks of a *Cholera Indica*.

Dr. Keir, of Moscow, has lately proposed the following definition, which, with the exception of one clause ("aliquando contagiosus"), appears to be perfect.

"*Morbus aliquando contagiosus, plerumque virium vitalium subita maximaque prostratio,*

oppressa debilisque Cordis Arteriarumque actio. Recessus sanguinis a superficie ad interiora, diarrhæâ vomituque serosis raro bilis coloratis et fibrarum Musculorum spasmis; animi facultates parum turbatæ."

Now on comparing this with the description given by our great nosologist, Dr. Cullen, it is evident that the diseases are totally different; when the principal symptom which characterises the Cholera he treats of, is an inordinate secretion of bile. "Humoris biliosi vomitus, ejusdem simul dejectio frequens."

The symptoms of the present epidemic coincide so exactly with those so fully described in the Bombay Report of the Indian Cholera, that I transcribe them *verbatim*.

"The attack was generally ushered in by a sense of weakness, trembling, giddiness, nausea, violent retching, vomiting and purging of a watery, starchy, whey coloured or greenish fluid.

"These symptoms were accompanied or quickly followed by severe cramps, generally beginning in the fingers and toes, and thence extending to the wrists and forearms, calves of the legs, thighs, abdomen, and lower part of the thorax. These were soon succeeded by pain,

constriction and oppression of stomach and pericardium, great sense of internal heat, inordinate thirst and incessant calls for cold water, which was no sooner swallowed than rejected, together with a great quantity of phlegm, or a whitish fluid, like seethings of oatmeal.

“ The action of the heart and arteries now nearly ceased, the pulse either became altogether imperceptible at the wrists and temples, or so weak as to give to the fingers only an indistinct feeling of fluttering.

“ The respiration was laborious and hurried, sometimes with long and frequently broken inspirations. The skin grew cold, clammy, covered with large drops of sweat, dark, and disagreeable to the feel, and discoloured of a bluish, purple, or livid hue.

“ There was great and sudden prostration of strength—anguish, and agitation. The countenance became collapsed; the eyes suffused, fixed, and glossy; or heavy and dull, sunk in their sockets, and surrounded by dark circles; the cheeks and lips livid and bloodless, and the whole surface of the body nearly devoid of feeling.”

To this description must be added as a pathognomonic symptom, the coldness of the tongue,

which was universal in the stage of collapse. The change and loss of voice was also very remarkable from the commencement of the attack. It was a peculiar sound, difficult to describe. The patient felt as if he could not speak, and yet there was little sense of constriction or spasm about the glottis.

The temperature, taken in the stage of collapse, when the skin was corrugated, and had that deadly feel so peculiar to this stage, was twenty-four and a half Reaumur taken under the tongue, and only twenty-three in the hand.

The patient was a young woman in the prime of life, and had been ill only twelve hours.

The suspension of the urinary secretion was very general, if the disease was prolonged beyond the first stage.

Such are the symptoms of this formidable malady in its aggravated form, and with such for our guide, it would seem hardly possible to mistake it. Few cases, however, presented all the symptoms enumerated in this extract, or exhibited such well defined marks. In many its approach was insidious, assuming no one feature by which Cholera could be recognised,

and in the first days of the epidemic, the modes of attack were as various as the persons attacked.—See Case 6.

Some were suddenly seized whilst walking in the streets, and seemed as if struck by lightning, of which I myself witnessed a case. Others, gradually, with what they supposed to be a slight bowel complaint, which they consequently neglected, till awakened to the real nature of the case by their extremities becoming cold.

It is impossible to detail, in fact, all the anomalies which presented themselves; but as there were some striking differences in the present epidemic, both from that described by the medical men who had witnessed the Cholera in India, and even in the disease which prevailed at Moscow, so I shall slightly sketch these, speaking only of what I myself witnessed, and of that class of symptoms which I found most prevalent.

A collection of the experience of several medical men would be a useful document, inasmuch as it would elucidate one of the most marked characters of the disease: viz., its eccentricity; for the accounts I have collected

from my colleagues differ much from my own observations, and it is probable no two reports would be alike.

The affection of the head was almost universal, but it was of different kinds.

Sometimes the patient complained of a sudden lancinating pain, which was of momentary duration; at other times the feeling that is produced by fainting, dizziness before the eyes, dimness of vision, *muscæ volitantes*, preceded the attack.

The following Case illustrates a peculiar feeling in the head immediately preceding an attack of Cholera. The person was seized in my presence, whilst giving directions regarding the arrangements of a large hospital, over which he presided. He was sixty years of age, and apparently in perfect health; whilst in the midst of conversation he suddenly put his hand to his head, and complained of a sharp pain passing through the temples, which lasted but for a few seconds; he ascribed it immediately to having taken a pinch of snuff from a neighbour's box, which being stronger than that which he habitually took, it had got into his head. The sensation passed off, and he resumed his conversation. This took place at

nine o'clock, p. m., at eleven he was seized with other symptoms of Cholera, and died of the disease after five days' illness.

Though I have almost universally found an attack of Cholera preceded by something bordering upon vertigo, yet in one rapidly fatal case, no such feeling was present till it was produced by the weakness caused by the evacuations. Case, No. 1.

Noise and singing in the ears have never, as far as my recollection serves me, been absent in any case of real Cholera that I have attended. It even causes deafness in many, and this is generally the symptom upon which the lower class lay the greatest stress.

Nausea and vomiting varied much in the present epidemic, and more particularly at its commencement, when they were seldom found in the distressing degree mentioned in the extract. As it advanced, they became more frequent, but many patients lay for hours together without rejecting any thing from the stomach, and several of these cases terminated fatally. In all instances the desire to drink was great, and the thirst insatiable; and this symptom remained as long as the more characteristic marks of Cholera were present. Cold liquids

were preferred to warm, but in whatever state they were taken they were seldom rejected.

Where vomiting did occur, it was very similar to what is seen in sea sickness : the patients lay quietly in a horizontal posture, without much nausea or desire to vomit ; but when they raised their heads, they commenced vomiting immediately, and with that kind of straining which we witness in sea sickness.

The matter rejected differed according to the contents of the stomach at the time it was thrown up ; but where it was not coloured by food or medicines, was generally of a greenish cast. In some it had the appearance of coffee grounds ; and in others a quantity of pure bile was vomited. The more empty the stomach, the greater was the distress produced by the effects, but the patients always spoke of relief occasioned by free and copious vomiting ; upon the whole however nausea and vomiting were not the most distressing symptoms, and in this respect the disease differed from its Indian parent, for in the latter the vomiting is described as incessant, the patient not being able to retain the least thing upon the stomach, not even a grain of opium ; and the fatality of the disease was

attributed to the circumstance of medicines not being able to produce their effects on account of their speedy rejection from the stomach.

The pain in the abdomen varied in different subjects: in some it was very acute, increased by pressure, or even by the touch, resembling peritonitis; in others, a burning and twisting pain about the navel accompanied by a sense of spasm; in many instances very little acute pain was complained of. In some a rumbling noise, such as is produced by flatulency, was observed. Again occasionally in others, a heavy dull pain, expressed by a low and peculiar groan; but in very few instances could I realize the following description.

“ The pain in the epigastrium and in the bowels was excruciating, the colicky pains were dreadful; it seemed as if the intestines were torn in pieces; the intervals of pain were very short; the pains commenced with the first effort to vomit, and did not cease till the disease terminated either by death, or sudden removal of all the symptoms.”

Neither in private practice, nor in the hospitals which I attended, did I witness any such sufferings as are here described; and in proof of this, I may mention a circumstance which

occurred during my attendance at the Sakoloff hospital.

A negro was brought in under suspicious circumstances ; he believed himself in the agonies of death from being poisoned. He screamed most violently, begging for a priest to confess him.

It happened that at this moment a physician well conversant with the disease was ascending the stairs with me. " Ay, that 's the true Cholera cry," he exclaimed. I replied, this is the first patient we have had, who has expressed his sufferings in this manner ; we are accustomed generally to a low, moaning voice.

Spasmodic affections of the abdominal muscles, and contractions of the recti abdominis, were witnessed in a child of four years' old, who died of the disease.

The veins of the lower extremities were often drawn into knots, and the toes bent as in common cramps ; and though necessarily painful, were by no means so agonizing as described by many writers.

A pricking sensation about the instep, or a feeling similar to the commencement of the gout, was not uncommon ; but this was little heeded till other symptoms succeeded.

Some complained of great pain in the region of the kidneys, and of other nephritic symptoms.

Slight spasms in the chest have often preceded an attack. These were of momentary duration and resembled a sharp instrument passing through the lungs, stopping the breath and causing great anxiety; such as is frequently witnessed in a more advanced stage, where the symptoms are those of real asphyxia, occasioned by stagnation of the blood in the heart and large vessels.

In this stage the intercostals were thrown into painful spasmodic action from the double duty imposed upon them. Spasms in the fore arms were not very frequent.

A tremulous motion of one or two fingers, or of the fleshy part between the thumb and forefinger, and twitching of the zygomatic muscles of the face were also found to give warnings of an attack.

To these may be added a feeling which patients could never express—a restlessness, bodily and mental—a nervous excitement which must be felt to be understood, and which affected many who had, and many who had not the disease in question.

It is impossible to measure the effects of fear

upon the human mind, or to calculate the action of the latter, under uneasy impressions, upon the body itself.

It is not possible to say whether this was the real and only cause, but certain it is that during the larger portion of time during which the Cholera prevailed, there was a general indisposition, a certain *malaise*, which affected almost every individual.

People complained of uneasy sensations in the bowels, a certain feeling which was new to them, a sense of dragging down, and a loss of tone in the whole system.

This affection, whatever it might have been, was not under the control of medicine ; it subsided with the decline of the disease ; hence I attribute it to nervous affection, and the effects of fear.

OF THE PREDISPOSING AND EXCITING CAUSES.

OF all causes which predisposed to this disease moral affections were found the most frequent; and their baneful effects were not merely confined to rendering their victims more susceptible of the malady, but they produced a decisively fatal influence upon the constitution itself.

That many died of fright was a phrase re-echoed by every medical man in the City, and fear may consequently be considered as the chief predisposing cause.

I did not find that a previous weak state of health, (except in the old,) nor even the habitual derangements of the primæ viæ predisposed to this affection, unless these were caused by previous intemperance, and the abuse of wines and spirituous liquors. The effects of previous intemperance upon the system seemed to predispose it more than any other cause to the disease.

The state of the weather was nearly the same during the first four or five weeks of the epidemic. The winds prevailed from the east, and

the thermometer averaged about fifteen and a half degrees off Reaumur in the shade. The nights were warm without much dew. A sudden change in the weather, which occurred towards the decline of the malady, when a cold wind accompanied by rain prevailed for several days, did not in the least influence it.

It had been observed at Moscow and Riga, that any great fêtes where the lower orders were assembled, and where intoxication was a common consequence, were always followed by a marked increase in the ensuing day's list of invalids ; but notwithstanding two such fêtes were held here, accompanied by their usual result—inebriation, yet no augmentation in the number of the sick followed ; because they took place at a time when the malady was on the decline, a circumstance highly characteristic of its epidemic nature, which, when upon the decrease, was not to be renewed by any communication between individuals.

Imprudence and excesses of the table, the use of undressed vegetables and unripe fruits, cold liquids taken into the stomach when the surface is preternaturally warm, are all so many exciting causes. In short all those causes which are said to produce the common Cholera under

ordinary circumstances seem to have the same effect in the present epidemic ; but with respect to these particular inquiries should be made, as both the causes and effects are often very much exaggerated.

The use of quass has been much condemned, particularly if taken when the body is warm ; but as it is the common beverage of the people, who continued to drink it in as large quantities as ever during the whole of the time, so, many cases that were attributed to it must be placed to other accounts, seeing what numbers indulged in it with impunity.

If the disease be specific, and *sui generis*, it is evident that imprudence in diet cannot of itself produce it ; but as it may predispose to it, so it comes under that class of exciting causes.

It was observed of this malady, as Sydenham observed of the plague, that there was during its prevalence what he styled a *Constitution Epidemica* ; or that all kinds, or the greater part at least, of the reigning distempers were converted into this prevailing epidemic.

In this sense, therefore, an imprudence in diet capable of producing under common circumstances an ordinary bowel affection, would

in the present case generate a Cholera Morbus, inasmuch as it did by this derangement become a predisposing cause. Much obscurity must always exist about predisposing causes, for they are conjectural and not tangible, and where we seem to see them they are frequently found not to exist.

If irregularities in diet can generate the Cholera, then the disease can only be considered as an aggravated form of the malady already known in Europe. This has been asserted by men of eminence, who consider Celsus to have been perfectly conversant with it; but the difference between the symptoms and course of the present epidemic and that of which Celsus treats, is such as to preclude their identification.

Though it is evident that intemperance was one of the chief predisposing causes, yet it was equally evident, that free and generous living were among the best preservatives against the Cholera. Among our countrymen of all classes, and we reckon more than two thousand in Petersburg, only thirteen died. Several of these were old and infirm; and this must in a great measure be attributed to the difference in their modes of living.

That it was rather ascribable to this than to any other cause, seems also probable from the following circumstances, which are much to the purpose.

In a sugar manufactory, where all the workmen had an increased allowance of food of a wholesome kind, no individual was attacked. In another large establishment where the workmen were composed of slaves and freemen, the greatest mortality prevailed among the former, whilst the latter almost all escaped.

Even in private families the same was observed to take place; and it may thus be stated as a positive fact, and one well entitled to legislative attention, that pure air and good substantial living will be found among the best preservatives against the Cholera. The Russian labourer lives at all times upon hard fare; even his best food is much less nutritious than that of our peasant; he seldom eats meat, even when he has the means of procuring it.

Black sour rye bread with salt sprinkled upon it, and occasionally a bit of salt herring or an onion, constitute his principal food.

The long fasts also enjoined by his church, and the quantity of oil and dried mushrooms which he consumes during these periods, toge-

ther with the baneful use of ardent spirit, which creates a kind of fictitious strength, all tend to undermine what little stamina nature may have originally given him; he is seldom a long liver, and soon falls a victim to any serious disease, even in his prime. To determine the proximate cause of a disease should be the first object of our inquiries, because it involves all the rational parts of practice.

Much has been written upon this subject with regard to the Cholera Morbus, and many a *ratio symptomatum* has been advanced; but, as hitherto, none of them have been founded on indubitable evidence (nor had they been so, could this evidence have been sufficient to have accounted for all the phenomena); these theories have lived their day, to be replaced by others not less improbable, and not more satisfactory than themselves.

It is much to be lamented, that from uncontrollable circumstances a minute investigation of the effects produced by Cholera upon the body has not been generally attempted by dissection, during the prevalence of the epidemic in Petersburg. As all reasoning upon matters of fact is founded on the relation of

cause and effect, so it is most desirable to study well the effects of diseases upon the different organs, as from such knowledge alone can we be able to judge of their causes.

Minute and repeated dissections of the patients who have died should never be omitted where there is a possibility of performing them.

Among the various theories which have been formed of this disease,

Some have ascribed it to concussion of the brain.

Some to asphyxia.

Some say the seat is in the solar plexus.

Some consider it a species of tetanus.

Some, and with much more probability, have defined it a catarrh of the intestinal canal.

It would much exceed the limits of this paper to discuss the different theories here advanced.

It may be allowed me to ask the following questions:—

What analogy exists between the effects produced by Cholera and those by mineral poisons upon the system?

Is the bile really changed in this disease?

What are the changes it undergoes?

Does the blood undergo any other change than that produced by the separation of its aqueous parts?

Is this process chemical, mechanical, or vital?

What is the state of the other secretions examined chemically?

Is that peculiar smell of the perspiration to be attributed to a mixture of urine secreted vicariously from the surface of the body?

Is the Cholera a new disease?

Is not the primary cause a spasmodic action upon the capillaries, causing sudden revulsion to the internal surfaces?

Is not this proved by the sudden abstraction of blood from the whole surface by the diminution of animal heat, by the corrugated appearance of the skin from the emptiness of its capillaries, and by the copious secretions of the internal mucous membranes, which, when allowed to continue too long, deprive the blood of its former fluidity, and prevent the heart from propelling it in this inspissated state through the smaller vessels?

Is this not countenanced by the use of opium, which overcomes the spasms, and, conjoined with external heat and frictions, restores the

balance between the external and internal mucous membranes?

Are not these opinions strengthened by the greater probability of curing the disease at its commencement, before the spasm has too long existed, and the blood been deprived of its serum?

IS THE CHOLERA CONTAGIOUS?

WITH regard to this important question, my experience has hitherto been too limited for me to offer any decided opinion upon the subject.

It requires a mass of evidence, and a patient investigation of many circumstances; which, though at first sight plausible frequently prove deceptive, to make up one's mind positively on this question.

As far as my practice is concerned, both in the quarter allotted me, and also in private houses in different parts of the town, I have no proof whatever that the disease is contagious.

The first patient I saw was upon the third day of the epidemic, and upon strict inquiry I could not trace the least connexion between the patient, or those who were about her person,

with that part of the town where it first appeared, a distance of several versts.

As regards the attendants of the sick, in no one instance have I found them affected by the disease, though in many cases they paid the most assiduous attention, watched day and night by the beds of the affected, and administered to all their wants.

I knew four sisters watch anxiously over a fifth severely attacked with Cholera, and yet receive no injury from their care.

In one case I attended a carpenter in a large room where there were at least thirty other men, who all slept on the floor among the shavings; and though it was a severe and fatal case, no other instance occurred among his companions.

In private practice among those in easy circumstances, I have known the wife attend the husband, the husband the wife, parents their children, children their parents; and in fatal cases, where from long attendance and anxiety of mind we might conceive the influence of predisposition to operate, in no instance have I found the disease communicated to the attendants.

As for many reports which have been cir-

culated, and which *prima facie* seem to militate against the statement, I have endeavoured to pay the most impartial attention to them; but I have never found upon thorough investigation that their correctness could be relied upon, and in many instances I have ascertained them to be designedly false; so that as far as proof can be drawn from my own limited experience, I have none to offer in favour of Contagion.

The present disease has borne throughout the character of an Epidemic, and when the reports advanced in proof of its contagion have been minutely examined, they have been generally found incorrect; whereas it is clear and open to every inquirer, that the Cholera did not occur in many places which had the greatest intercourse with Petersburg at the height of the malady, and that it broke out in many others which have been subjected to the strictest quarantines.

The difference however between contagion and infection requires to be more fully explained, if they are not synonymous terms.

If a disease can be proved to be infectious, it may by the same reason be proved contagious, because the question will then resolve itself into predisposition or peculiar susceptibility.

A person who in one condition or state of body is capable of receiving the disease by what is termed infection, or as it were a concentration of the miasma such as occurs in the wards of a hospital, will in another state contract the disease from a much minuter quantity, or such as may be communicated by the touch ; for we have no measure of the quantity of deleterious matter with which an atmosphere may be impregnated ; we can judge only by the effects, that some morbific matter is present, though we are not able to detect it by the nicest analysis.

Idiosyncrasies teach us, that some substances are cognizable to some persons and not to be recognized by others at the same moment, when both are placed in the same circumstances.

The scent of a flower will produce a morbid effect upon the olfactory nerves of one person, whilst another will hardly discover any smell in it.

There is a disorder to which some people are subject in the hay-making season ; it is attributed to the pollen of flowers, which, dispersed through the air and penetrating the nares, irritates the mucous membrane to such a degree as

to cause constant sneezing and even inflammation. It is called the hay asthma.

This illustrates the meaning of peculiar susceptibility and predisposition, for very few people are subject to this affection, though hundreds are exposed to it at the same time.

Those who are so affected must be said to have a peculiar irritability of the mucous membrane of the nose; but this is not reducible to ocular demonstration, and we can only judge of the cause from the effects.

The same arguments may be applied to contagion, and the same susceptibility of impression may reduce to a relative what was supposed to be an absolute fact.

The question regarding predisposition consequently can never be fairly solved till we are able to decide *à priori* and from the appearance of an individual, whether he is susceptible of receiving morbid impressions from being placed in circumstances capable of producing them. In marching a regiment over the Pontine Marshes we cannot decide *à priori* how many soldiers shall fall down ill of Malaria.

The same doubts may exist regarding Cholera as have long existed with regard to puerperal fever; and it would be well to inquire if under

peculiar circumstances, a disease reputed to be not contagious may not be converted into a contagious one.

The arguments which have hitherto been adduced on both sides may be compared to the two knight-errants, who, after having fought some time about the metal of which the shield was made, gave up the contest when they had examined both its sides.

OF THE DIAGNOSIS AND PROGNOSIS.

IT would be hazardous to say that a common bowel complaint, or a fit of the colick, is an attack of Cholera ; and yet many such a commencement has proved to be so in the end.

It is utterly impossible to determine the nature of the complaint till the symptoms are at their height ; but when once the Cholera physiognomy is present, a child would be able to recognize it.

We are often placed in perplexing situations in this respect ; we are exposed to the censure of the fastidious, if we pronounce a case to be Cholera, which, terminating favourably in a

short time, convinces them to the contrary. We are doubly blamed if we treat that lightly which afterwards proves to be Cholera.

Yet to say that all the successful cases have not, and that all the fatal ones have been Cholera, is to rob the profession of what little merit it may have.

If it is dangerous, therefore, to form hasty opinions, it is equally so to be over cautious from a regard to our medical reputation.

In our investigation, therefore, we must take into consideration the age and habits of the patient, and weigh well the symptoms, taking due care that he be not induced by fear of the disease to lay too much stress upon trifles; and our questions should be particularly guarded.

In paying particular attention to the symptoms, we must not alarm the patient by laying stress upon any of them; for of all things to be dreaded, fear is the most so in this complaint.

When we have well considered the case and made up our minds, we must reply to the questions of our patient by evasive answers, or even by positive denials when the disease is actually present; for we may truly say with Pope, in such circumstances, that

“Blunt truths more harm than little falsehoods do.”

These observations apply to doubtful cases also, the diagnosis soon becoming evident when the disease really exists.

As to distinguishing at the onset what species of Cholera we have to deal with, that will be almost impossible in many cases; nor will it be of practical utility. If there be one symptom more characteristic than another of the Indian Cholera, it is the watery nature of the stools.

Sydenham's description of the Epidemic Cholera of 1669 is not less terrific than that quoted from the Madras Report.

The prognosis varies much in this disease, as it is often difficult to determine what may be the consequences of the attack hereafter.

In slight cases, and in previously healthy subjects, where the symptoms yield to the first remedies, it will always be favourable.

In severer cases, if the pulse and animal heat are renewed after having been suspended, and keep up to any thing approaching a natural standard; if the pains do not suddenly subside, but assume more of a colicky character; if the fæces become more formed, the clammy perspirations cease, and urine be again secreted in small quantities; if the countenance return to its human appearance, and the voice to its

original tone; all these may be considered as favourable prognostics.

A sudden cessation of all pain after severe suffering from cramps in the bowels, or a continued increase of spasms, becoming more and more insupportable; the rejection of every thing taken into the stomach; a complete loss of pulse and animal heat, which are not to be reproduced by frictions or any of the means usually employed; difficulty of respiration; a sense of suffocation; the peculiar countenance, moral depression, and no symptoms of reaction, are all unfavourable prognostics.

As regards the Prognosis, however, it would require a separate Treatise for its explanation, for it differs in every individual case, and nothing but experience in the disease can explain it.

OF THE MEDICAL TREATMENT OF CHOLERA.

THE treatment of diseases is divided into two kinds, the rational and the empirical. The former is founded upon certain principles, and the means are adapted to certain indications.

Thus we know that certain drugs will at all times, *cæteris paribus*, produce certain effects upon the system.

The action of the heart and arteries is reduced by the influence of digitalis.

Precisely the contrary effect will ensue from the employment of ammonia.

The nerves are paralyzed by the action of lead, internally and externally employed.

They are strongly excited, on the contrary, by the action of nux vomica; hence we say that digitalis and lead are sedatives, and ammonia and nux vomica stimulants, because such effects are excited by the employment of these drugs upon the system in a state of health.

The empirical practice, on the other hand, is determined merely by use, and acts according to no physiological laws with which we are acquainted: thus bark and arsenic, two very different substances, cure a fit of the ague, but we know not what action they exert upon the system to produce this effect. Such medicines so applied are called specifics.

In our choice of treatments we prefer the rational method, because we see, or seem to see more clearly a path which must always be more or less obscure; but this method is founded upon the relation of cause and effect.

Thus cold suddenly applied will cause an inflammation of the mucous membrane of the nose and fauces, and this is called catarrh. To remedy this we make use of such means as will counteract the effects of a known cause upon a known part of the animal economy—viz., the mucous membranes.

The cause and effects, at least in their due relations, are not known as regards Cholera, hence the method of cure has not been rational.

As no one medicine, nor any class of medicines, have yet been found that will in the greater number of cases cure the disease; so the practice can neither be called rational nor empi-

rical, if we employ the word empirical according to the signification given it by the older writers, who implied by empirical practice such as had been sanctioned by use and experiment.

If we may be allowed to give a name to the practice generally adopted in Cholera, we shall call it Symptomatical.

It is evident that of all the different methods this must be the most unsatisfactory, because being founded neither on theory nor on experience it must vary with every different case that presents itself; as each constitution being different, the effects of disease upon it will be different also. That such is the case in the present epidemic every physician who sees the disease will be ready to acknowledge, whilst he regrets the melancholy truth of the statement; and he will be obliged to confess that after having tried the different specifics proposed, and after having been foiled in attempting to discover a rational method, he has in most cases been reduced to the third plan, or that of treating symptoms as they presented themselves.

If these premises are granted and the statement allowed to be correct, the conclusion will

naturally follow, that as such practice is unsatisfactory, it has been also unsuccessful; for upon comparing the results of each medical man's practice during the whole of the present epidemic, it will be found upon an average that he lost one half upon the whole number of his patients; that during the first days of its invasion he lost eight-tenths of those who were really attacked with Cholera, whereas during the decline of the disease he saved the same proportion; and that taking the whole number of cases which presented themselves during two months that we were afflicted with this pestilence, more than half resisted all the effects of medicine, and perished either of the disease or its immediate consequences.

How does this accord then with the accounts we daily see in print, and which have all the testimony that their authors can require respecting their veracity?

Before we solve this problem it may be allowed perhaps to digress a little, and inquire if this seeming contradiction be new in the history of medicine, and if it be confined entirely to the disease in question.

Some analogy has been mentioned between puerperal fever and Cholera as regards the

question of infection; the same will hold good with respect to the anomalies in its treatment.

We subjoin the following extracts from Dr. Gooch's last work upon this disease.

“ Puerperal fever was prevalent in Derbyshire and the adjacent counties between 1765 and 1775, and was described by Dr. Butter of Derby.

“ His opinion was that bleeding ought never to be used in this disease unless when complicated with inflammation, and even in these cases bleedings of three ounces were sufficient; that the best remedy was ten grains of rhubarb and ten grains of cordial confection every day till the stools became natural; and that this mode of treatment *never failed*.

“ In 1787, about ten years after Dr. Butter wrote, a puerperal fever was prevalent and fatal in London, and was described by the late Dr. John Clarke, . . . Of the patients attacked with this disease, more than *two thirds* died; bleeding was injurious; emetics were hurtful; bark and cordials, though indicated by debility, were inefficacious.

“ Dr. William Hunter, and Richter, the professor of medicine and surgery in Gottingen, were two of the most useful minds that ever appeared in our profession. If any men could, such men

might be trusted for giving accurate reports of a disease. Yet compare the accounts which these distinguished men have left of their experience in puerperal fever.

“ Dr. William Hunter used to say in his lectures—‘ Of those attacked by this disease, treat them in what manner you will, at least three out of four will die. We tried various methods, (bleeding, refrigerants, stimulants, mithridate,) but every thing failed.’

“ Richter, speaking of the child-bed fever, says, ‘ I have often seen the child-bed fever, and always treated it successfully. I have also seen cases, both near and at a distance, in which the fever was treated differently from what I am accustomed to treat it, and the patients died. I therefore think that I have a right to offer my opinion about the nature and treatment of this fever.’

“ Richter, at the time he wrote this, was sixty years of age. The inexperience of youth therefore will not explain it; and it is explicable only on the supposition, either that old as he was he had never seen the epidemic puerperal fever, or that if he had, the epidemics which he had seen were singularly mild.”

I shall add from the same authority the opinion of four eminent men in London, who

had tried a plan of treatment employed by M. Doulcet, of the Hotel Dieu, and who made a report upon the same to the Royal Medical Society of Paris in 1782. After having been foiled in every thing else, he at length tried emetics. "From losing every patient, he now lost none. During four months nearly two hundred were cured: five or six refused to take the medicine, and all these died.

"When this account arrived in England, it produced, as may be easily supposed, a strong sensation; and the practice was tried by various physicians with different results.

"Dr. Walsh said it was infallible.

"Dr. Denman, that it was eminently useful.

"Dr. Lowder, that it disappointed him.

"Dr. John Clarke, that it was injurious.*"

In comparing these accounts of a well known disease with those we receive of the Cholera Morbus, we shall certainly confess there is a great analogy in the anomalies which they both present.

I extract the following from the Madras Report:—

"One thing however, I fear, is certain, viz.,

* "An Account of some of the most important Diseases peculiar to Women. London. Murray. 1829."

that we are as yet as little acquainted with its origin, as its mode of cure ; for example, I read from Bombay, that a number of cases of the Epidemic Cholera have lately appeared in the island, but that its mode of treatment is now so well understood, that its re-appearance causes no alarm : at the same time, I hear from the camp of a corps now on its march, ' We lost about ten people a day : no one returns alive from the hospital tent ; and our Doctor says, there is no cure for it. One medical man boldly estimates his cures by thousands, while his no less zealous neighbour is heard to say, though he has followed the same plan of treatment, he has failed throughout.'"

Without referring, however, to the history of the disease, and its treatment in India, than which nothing can be more contradictory, let us compare the accounts of those who have practised in the late epidemic in Russia.

It was asserted, that the only salvation consisted in bleeding, resorted to in the first stage of the disease ; and this upon such good authority, that the government, in its zeal for the public good, gave orders to the different medical men all over the empire to employ the lancet immediately upon being sent for.

It was soon discovered that this was not an universal remedy; and though the lancet was employed, the blood frequently would not flow, and the order was very judiciously countermanded.

It was then discovered, that if perspiration could be once excited, the danger was over; and various ingenious modes were contrived for its accomplishment.

Dr. Loder, of Moscow, observes, “*La chose la plus essentielle et la plus pressante, est de debarrasser le corps la plus promptement possible du Miasme, et ceci s’opere par la transpiration.*”

Dr. Jenicken, in his reply to Dr. Loder, says on the contrary, “*La transpiration me paroit superflue; si elle est profuse, elle peut devenir nuisible.*”

Of internal remedies calomel and opium were the most in repute. I saw Dr. Menkoffski last autumn as he was on the point of departing for Saratoff, and I asked him what plan of treatment he proposed to adopt: he replied, bleeding at first, and then calomel and opium. I saw him a year after upon his return, and he told me he had no success with this plan, but when he changed it for warm baths and small doses

of magnesia and rhubarb, he was very successful.

Without going into further detail previous to the arrival of the disease in St. Petersburg, we came to that period which seemed to found a new era in the history and treatment of Cholera, and refer to Dr. Leo's practice and the sub-nitrate of bismuth.

This was believed to be a specific, and no medicine was ever more generally distributed than was this invaluable remedy. What was the reply to the inquiries made respecting its use in this capital?

One practitioner observed he considered it all but a specific.

A second, that it acted as a poison whenever he had seen it employed.

A third, that if the patient did not die of Cholera, he died of congestion of the brain, where bismuth had been administered.

With regard to bleeding, the same difference of opinion prevailed. When I was performing duty at the Sakoloff Hospital, no case recovered in which bleeding had been resorted to.

My successors informed me that afterwards all the cases that were bled early in the disease recovered.

One physician asserted that he had not lost a patient; he took away a tea-cup full of blood and gave an infusion of lime-flower to drink.

With respect to the use of opium, many asserted that typhus fever was a necessary consequence of its employment, and yet of twenty-three cases in public practice that I so treated, only one died of typhus—seven died within forty-eight hours of the attack, the rest recovered.

However difficult a task it may appear to reconcile such discordant and contradictory reports, we shall again refer to the history of puerperal fever, which comes very à propos to save our credit.

“Another remarkable circumstance about this disease is, that when it is most prevalent it is most dangerous. Each case is much more difficult to cure than when it occurs seldom. The practitioner finds that although the group of symptoms resembles what he was formerly accustomed to, he has now to deal with a disease far more obstinate and destructive, and his usual remedies are not so successful as formerly; he loses case after case in spite of his best efforts. When it has thus been raging for a considerable time, it at length subsides; the

cases become less frequent and less severe; the practitioner finds his treatment becoming more successful, partly because experience has taught him to detect it earlier and to treat it better, but probably also because the disease has itself become milder."

In the first place then we should apply to those who have never lost a case, the words of Dr. Gooch to Richter, viz., that though they may be sixty years old, they have never seen a case of Epidemic Cholera.

Those who have been so uniformly successful have either only met with cases of common Cholera, or treated the other when upon the decline. For this circumstance alone stamps the identity of the present epidemic with the Eastern disease, viz., that upon the onset, whatever may be the practice, it is almost universally fatal; and I appeal to the candour of my colleagues if, during the first ten days of its invasion, it did not sustain this frightful character.

This, too, is the grand secret, this the real solution of the problem, this unravels all the intricacies, and forms a bond of union between elements which appear so discordant.

The Epidemic Cholera upon its first invasion baffles all attempts to conquer it; but it gra

dually loses its intensity, and towards its decline becomes as tractable as other disorders of the alimentary canal.

If we are asked why it should so operate upon its first invasion, we can only confess our ignorance and reply, that medicine is an art and not a science, that the one is founded on principles which are known and immutable, the other upon one that is unknown and is ever varying, viz., the vital principle.

It is this which governs, by its own peculiar laws, the animal economy; that regulates all predispositions, susceptibilities and impressions, and which distinguishes the animal from the machine he fabricates.

Having endeavoured to prove that the apparent discords may be reconciled to a great extent by considering the epidemic in its different stages, I have subjoined some observations upon the different remedies that have been employed, and upon the methods of treatment which I have found most successful.

EXTERNAL MEANS.

THE use of baths was at the commencement of the epidemic almost universal ; but they soon fell into disuse, and upon the whole may be considered as having been prejudicial.

They were often succeeded by great exhaustion, and many were taken dead out of the water. The difficulty of transporting a patient from his bed to a bath was often considerable, and very inconvenient to him ; and as the object could be equally attained by frictions with hot cloths, or bags of hot sand applied over the whole surface, much distress and fatigue were spared the patient by substituting these means for baths. Unless they are employed at the commencement, when the excitement is still considerable, they will invariably do harm ; but if easily administered and sufficient attendants are at hand, they will often be serviceable in this stage and prove very comfortable.

The horizontal position has been particularly

recommended during the whole course of this disease, and this must be disturbed by immersion in the common bath.

Vapour baths are much less prejudicial in this respect, because this position may be maintained upon the simple and judicious plan upon which they are constructed. If the surface be cold without the vital powers being too much exhausted, the use of the hot-water bath is indicated ; but as all the effects can be produced with much less inconvenience and less risk by the vapour bath, it should always be preferred. If, however, the hot-water bath is used (and some patients will insist upon it,) the temperature should be regulated by the state of the body at the time it is immersed.

If a patient in the state of collapse, when the temperature is at twenty-four degrees, be plunged suddenly into a bath at thirty degrees Reaumur, much pain and uneasiness will be caused by the sudden transition from cold to heat. Neither should he remain longer in the bath than is necessary to restore the heat and perspiration, if this be the object.

Baths are upon the whole a doubtful remedy, and more effectual and less prejudicial means may be substituted for them.

BLEEDING.

FEW remedies require more decision in their employment than general blood-letting, and upon no subject is there a greater diversity of opinion. An indiscriminate use of any remedy must naturally bring it into disrepute, but in the present epidemic bleeding has been most decidedly beneficial, if employed judiciously.

Those who consider the disease a species of asphyxia, employ it under all circumstances and in all stages, and relate marvellous cures performed upon those who were apparently dead. The case of the young man who had only nephritic symptoms, but with total loss of pulse, illustrates its utility in restoring the circulation (see Case 6). Bleeding from the arm in the first stage, when the pulse is full and the temperature not reduced, is often sufficient to cut short the disease. The quantity of blood to be drawn should be but small; eight ounces will be sufficient to allow the remainder to circulate more freely and relieve the heart, and this will not too much exhaust the patient.

The blood is generally thicker than usual,

highly carbonized, and forms a loose coagulum. I do not know if the blood of Cholera patients has been analysed during the present epidemic. The patient usually feels immediate relief, particularly where the head has been much affected. He should be bled in the horizontal posture, and remain quiet for some time afterwards. The operation of medicines is generally much facilitated by a small bleeding.

The absence of the pulse is no prohibition to the use of the lancet, unless this is accompanied by other symptoms of great debility, and the system has been exhausted by previous evacuations, and the surface is covered with a cold clammy sweat; in such instances I have never seen blood-letting serviceable, though many assert the contrary. In some cases the pulse ceases to beat very early, but upon opening a vein the blood flows slowly at first, gradually the current becomes fuller and stronger, the pulse beats very sensibly, and the heart thus relieved is enabled to continue the circulation.

A few minutes later, the blood perhaps would have been so inspissated as to have precluded all utility of opening a vein, and asphyxia would have followed from the impediments afforded to

the arteries of the heart and lungs; hence it is that this disease requires such constant attendance, and such prompt decision upon the part of the practitioner.

There are some cases, perhaps, in which even in the first stage bleeding would be inadmissible, as with the old and debilitated, and such as have indulged in the use of spirituous liquors.

Upon the whole, however, there is no one remedy that can be quoted as having been more universally beneficial; and with regard to its use we may say again with Celsus, "Si vires sinunt sanguinem mittere optimum est."

Leeches may be used to relieve local congestions, but are more useful in the after treatment. They are too slow in their operation for such a malady. Cupping offers much greater chance of success; but it is hardly used in this city, and there are no expert cuppers.

BLISTERS AND SINAPISMS

ARE amongst the most efficacious means that we can employ for the cure of Cholera.

It may be said of them, that they are indis-

pensible, and there is hardly any stage of the disease in which they may not be employed with advantage.

It is upon the principle of counter-irritation that they are used, and as long as the disease endures so long will their use be indicated, and they should be repeated continually.

The pain in the bowels and even the sickness are often instantaneously relieved by the application of a large sinapism over the abdomen, and much pain is saved the patient, if it be applied early.

Blisters are more useful in the second stage, when chronic inflammation succeeds ; their action is too slow in the first, and they are less useful than sinapisms at this period.

They do not seem to produce such decided benefit when applied to the calves of the legs, and arms ; they may doubtless be useful, but if applied solely for the purpose of restoring the heat and circulation to the parts, it must be remembered that they will interfere with subsequent frictions which are more effectual.

Of the stronger remedies made use of for the same purpose, as the actual and potential cautery and the mineral acids, I have not witnessed any application.

When the skin has been excoriated by the use of sinapisms, anodyne fomentations, or even pulverized opium, sprinkled over the tender surfaces, will often be useful in relieving pain and nausea.

FRICTIONS

HAVE been employed in almost all the cases of Cholera, and particularly at the commencement, when they were reported to have been more effectual than they afterwards proved to be.

The object of friction is two-fold.

1st. To restore the circulation in the part, and the heat that is dependent upon it.

2d. To introduce remedies into the system by absorption.

The first may be effected by mere dry rubbing with the hand, or warm flannel, or the flesh-brush, and, if persisted in, will often restore the circulation to the extremities which were previously cold and senseless; but it requires great perseverance and long continuance, for it is necessary to keep up the circulation after it is restored; hence it can only be

recommended in those circumstances where there are plenty of attendants to wait upon the sick.

Varieties of liniments have been proposed to aid the effects of friction, but they may be superseded by steady rubbing with the hand, which should be sprinkled occasionally with a little starch-powder or a little camphorated oil to prevent abrasion.

Where proper and effectual rubbing cannot be depended upon, stimulating liniments should be employed; because little rubbing will suffice, and the effect will remain after it is discontinued.

The liniment composed of camphorated spirit and sal volatile will produce a rubefacient effect and answer every purpose.

Secondly. Medicines are introduced into the circulation by frictions, and consequently different medicines are employed according as there are different indications to fulfil.

Local pain and spasm are alleviated by frictions of opium, hyoscyamus, and other narcotics in the form of liniment or unguent.

The cessation of the urinary secretion, which occurs only where there has been much diarrhoea and vomiting (as the watery parts of the

blood are so disposed of that the kidneys have little to do), has led to the employment of spirit of turpentine as a liniment. I have never seen the secretion restored by its use, as I have seldom seen it suspended where the other evacuations were moderate.

Much stress has been laid upon this symptom even in the diagnosis of the disease, but upon consideration it appears to be fully accounted for, and is not confined to Cholera.

In summer much less urine is secreted than in winter, because there is much more perspiration, and cold suddenly applied to the surface will determine immediately to the kidneys, as we often experience.

Baron Haller mentions the case of a man who never washed his hands without a desire to make water, and a man will go through a whole summer's day, if in perspiration, without any urine being secreted.

This is the principle upon which it is suspended in Cholera; a principle of the animal economy, that one set of organs will supply the functions of another under peculiar circumstances.

Medicated liniments may consequently be employed with great advantage, when directed

to particular objects, and they are highly useful in relieving the stomach from the continual action of medicines.

ENEMAS

ARE useful in those cases, in which the vomiting prevents the action of medicines taken into the stomach. They have little effect in checking the diarrhoea, at least in the onset; for from the great irritability of the intestines, they are seldom retained long enough to do good.

They are of signal service in the latter stages, and particularly in such cases as have been attended with great spasm, where the bowels remain sore for a long time after, and every motion is productive of pain.

In such instances, an enema composed of half a pint of linseed tea and ten drops of laudanum produces immediate relief, and the same quantity may be frequently repeated, and will be less injurious to the system in general than where opium is given by the mouth.

In those cases, however, in which it is the object to check the diarrhoea immediately,

and every thing is rejected from the stomach, enemas should be resorted to; but the dose of laudanum must be larger than under other circumstances. Fifty drops in half a pint of starch may be injected, and even repeated without danger.

Emollient enemas have not been much employed, unless with opium, for the plan of dilution proposed by Sydenham has not been of much benefit in this epidemic.

INTERNAL REMEDIES.

ANTISPASMODICS are indicated at the very commencement of the disease, and will often cut it short at once.

The most powerful of this class of medicines are opium and æther. Musk and camphor seem to have had no particular action on the disease, though they are useful in combination with opium.

With respect to the employment of antispasmodics it should be remembered, that they are not specifics, nor are administered but with the

view to allay uneasy symptoms, and should be suspended when this indication has been fulfilled.

A long continued use of such remedies would be productive of cerebral congestion and consequent fever, as I have seen delirium tremens subsequent upon too long continuance of narcotics. Where these remedies have been much employed, purgatives become more necessary.

ASTRINGENTS

Are never indicated in cases of true Cholera; but as ordinary bowel complaints will, if neglected, degenerate into this disease, so they should be checked at once. The common chalk mixture, with a little tincture of catechu or laudanum, will answer every purpose. A decoction of rhatany root is also very useful in this affection.

DIURETICS.

As the suspension of the urinary secretion depends upon no want of energy in the organs of the kidneys, but arises from the aqueous parts

of the blood being secreted into the stomach and intestines, so diuretics can be of no service till the primary action is subdued ; for as soon as the balance of circulation is restored, the urine will be secreted in relative proportion to the rest of the secretions.

PURGATIVES

ARE among the most indispensable remedies in the cure of the Cholera, and upon a proper decision in their administration, will the duration of the disease often depend. They are most essential also in the after-treatment, and if sufficiently employed will very much curtail the period of convalescence.

The most common purgatives in use have been calomel, salts, and castor oil ; but the latter has been employed with the greatest success, and is an invaluable remedy.

A full dose of calomel is often useful in the beginning of the convalescence, as it acts upon all the secretions ; but the simple purging, which is so requisite after this disorder, is best effected by small and repeated doses of castor oil.

The stomach unfortunately is often inclined to reject the dose, which may sometimes be prevented by adding a tea-spoonful of brandy, or taking it upon peppermint-water.

As regards the use of purgatives, the same observation is applicable as with regard to anti-spasmodics; they are no specifics, but are given to combat and relieve certain symptoms.

They are indicated as long as the bowels do not perform their functions regularly, and the motions have an unusual appearance; nor is there any fear of re-producing the disease by their continuance, so long as we take these marks for our guide. It is much more likely to recur from neglecting to administer them; and the quantity of unhealthy matter which is often evacuated for a long time after the disease has been subdued, warrants the assertion.

Dr. Hamilton in his valuable *Essay on Purgatives*, has justly observed that their effects are not merely confined to expelling faeces from the intestinal canal, but that they act upon the secretions and change their morbid nature.

Hence it is that he was so successful in curing many diseases by these means, because he persevered in their use till this change was produced.

Sydenham, in treating of the cure of the Cholera, observes, that to administer purgatives in this disease is to extinguish fire by pouring oil upon the flames, "*ignem oleo extinguere*," but he speaks of the disease at its onset only.

There is evidently a diseased action in the whole of the inner surface of the mucous membrane, so much so that some have considered the Cholera as a catarrh of the intestinal canal.

This action is most vehement at the commencement, and if not subdued, is speedily fatal; but even in those cases where we have been fortunate enough to cut short the disease by the measures to be detailed, we cannot suppose that parts which have been so disordered should return immediately to their healthy state, and more particularly, when we consider that the extensive surface of the mucous membrane of the intestines has been thrown into morbid action.

It is with the body as with the mind, habit becomes second nature, and if a morbid action be allowed to prevail for any length of time, the difficulty of overcoming it will increase with its duration; hence if the morbid secretions of Cholera are not thoroughly expelled, a

cause will always exist for a recurrence of the malady. To obviate this, therefore, purgatives should be administered not only to expel what has been already secreted, but to empty the vessels of what they still retain, and excite in them a new and healthy action, of which we can judge only by the appearance of the fæces ; and when they are natural both in colour and consistence, then only should be discontinued the use of purgatives.

If they are neglected in the treatment of Cholera, fevers and chronic inflammation will be necessary consequences.

Salts and senna have been proscribed in this disease, and consistently with the contradiction that reigns upon the subject, some practitioners have spoken of curing all their patients by the use of Glauber salts ; whilst a physician well conversant with the disease in India, has assured me that he has seen Cholera produced by the common black dose, which is a composition of salts and senna.

The same observations will apply to other purgatives in this, as in other diseases.

EMETICS.

THE employment of emetics has not been very general, nor has it been attended with much success, except in those cases where popular remedies have been taken and have produced vomiting.

From an absurd idea, that poison had been distributed and mixed with the food and drink of the people, it was a common practice with them to drink large quantities of milk and oil when they felt indisposed, because they considered them as antidotes to poison. The natural consequence of such potations was copious vomiting, and several authentic instances of cures so produced are upon record.

The same means when regularly prescribed by physicians were not found to have so good an effect, but some reasons may be assigned for the failure.

In the first place, faith and confidence are no small adjuncts to the efficacy of remedies, and these are implied by the self-administration of them.

In the second place, a man finding himself

ill, believing himself to be poisoned and having the means of salvation at hand, applies to them immediately. If his illness depended upon indigestion the effect of the remedy would be certain, and more particularly, as no time would be lost in its administration.

If on the contrary he were to wait for medical advice before he used these means, two things would be evident, viz., that the time in which they might have proved serviceable would have elapsed, and that he had no particular faith in the remedy. Now we know that faith removes mountains.

I was called in the night to see an under officer of police who supposed himself attacked with Cholera. Upon entering his chamber I found him groaning in bed, and his wife was administering oil and milk to him. A table-spoonful of each were poured down his throat, and as soon as they were rejected from his stomach they were immediately repeated, and the whole cure consisted of this plan of treatment.—He recovered.

Salt has been equally recommended for the cure of Cholera, but it has, as far as we can judge correctly, no title to consideration beyond its emetic property.

“ Mr. Wilson states, that the routine practice in Malwah was to drench the patients with large draughts of salt and water. This must be attended with the double effect of emetic and purge, and administered at the outset would meet the indication of the first stage of the disease.”—*Kennedy's Notes.*

OF CALOMEL AND OPIUM.

It may be fairly asked, what led to the universal employment of these at the commencement, and what to their subsequent disuse?

The second query is answered by the first, it was the universal employment of them which caused their disgrace.

It must be the same with every remedy that is employed indiscriminately, no matter what testimony it may have in its favour—it may have cured hundreds and thousands—still it will finally be abandoned and proved to be worthless, unless it has been employed upon some known principle, and given to fulfil some indication. What effects are to be expected from a combination of calomel and opium? no other than the gradual introduction of mercury into

the system, for the opium will prevent any purgative effect of the calomel.

Is the introduction of mercury into the system sufficiently rapid to produce any good effect in this disease, particularly at its commencement? This question certainly must be answered in the negative.

The calomel being so combined, and not acting as a purgative, can be of no use therefore in the first stages, and the good to be expected must be derived from the opium.

The quantity of this will often not be sufficient to produce the desired effect, and hence the combination will fail in both instances. It is only when calomel is given in very large doses, so as to act upon the mucous membrane of the intestines, that it can be beneficial at the onset.

But though this combination may fail where administered empirically, it may be of signal service in many cases where we wish to produce a general mercurial action; and especially in the sequel of Cholera.

In slight cases also, where the quantity of opium is sufficient to allay the spasmody action, whilst time is allowed the calomel to act gradually, this combination may be of service; but it must share the same fate as all the vaunted

nostrums which, when administered indiscriminately, lose even the merit to which they are really entitled.

Where mercurial action is indicated, as in the chronic inflammation which sometimes follows, calomel may be given combined either with opium or hyoscyamus; the latter seems to be preferable.

Of calomel given in large doses, as a scruple or half drachm, I have had no experience; nor can I find that it was so administered during the present epidemic.

The difference of climate must be taken into consideration when such remedies are to be employed, and in such doses.

In investigating the truth of the specific action of calomel and opium, we shall probably find them to have succeeded when employed scientifically, and to have failed when used empirically; and in searching for the truth of twenty other specific remedies we shall perhaps meet with the same conviction. It is necessary also to inquire at what period of the disease so much success has been obtained by any particular remedy; for it is from this omission in our investigations that we have been led away with the reports handed over to us, of certain

remedies having been successful in so many cases.

These same remedies have proved equally successful in our hands when employed under the same circumstances, and at a period of the epidemic when nature herself will be all but sufficient to work out her cure. It is in the commencement of the disease that every thing fails, and that no class of medicines seems to have the least control over it; for in this particular also, as in many others before mentioned, the analogy holds good between the Cholera of the two zones.

THE SUBNITRATE OF BISMUTH.

IN corroboration of this assertion no better proof can be alleged than the boasted efficacy of bismuth. No medicine was so generally administered, and none was reputed to have had more success by the faculty in general. Its indiscriminate employment in all cases, from the slightest attacks to the moribund condition of the patient, brought it into disrepute. Its continued use also, after the symptoms which indicated its employment had subsided, caused cerebral congestions, and the patients died of the treatment as freely as of the disease.

It had been recommended by Dr. Leo to continue it during the whole course of the disease, and to administer no other remedy; but the Doctor had prescribed it thus successfully when the disease was already upon the decline, and as it is in many cases extremely useful, so at this period it would be peculiarly beneficial; and as the symptoms would rapidly decline under its use, the danger of administering it too long was naturally avoided.

It was said to have completely succeeded in Warsaw, so that it was vaunted as a specific; but when it was resorted to in the commencement of the same epidemic, which had travelled to Dantzig, it shared the fate of many of its predecessors, and was declared to be null and void in its effects.

Upon the whole, however, much good is to be derived from the prudent employment of this remedy. When used as an antispasmodic and not continued beyond the time indicated for its use, it has produced most beneficial results. No remedy seems to quiet the cramps and vomiting more effectually than bismuth, nor, when employed in moderation, does it produce those unpleasant effects upon the system which follow the use of severer remedies. If administered, the plan proposed by Dr. Leo is

the best, with the precaution of discontinuing it as soon as the vomiting and spasms have ceased.

If this effect be not produced after six or eight doses, it is useless to continue it unless there are symptoms of amelioration.

In the treatment of the present epidemic I have followed a plan suggested by the experience of others, and I have never abandoned it during the whole prevalence of the disease.

I have no other grounds to offer for my adherence to this plan than a success, upon the whole, greater than many others that were adopted.

Previous to the invasion of the disease, I had collected from authors and practitioners in general who had some experience in it, all the evidence I could obtain; and upon comparing opinions, and calculating the chances of cure from the different means employed, I selected those which, according to these testimonies, had succeeded the best. Popular remedies deserve also more attention in this than in most other diseases, for till some more certain light is thrown upon the nature and seat of the disease, all our practice must be empirical; and of nostrums, let us take those which have the greatest evidence in their favour.

The testimony of a ship captain is as valid as that of a physician, when the question is merely one of practical result.

The use of opium, therefore, appeared to me more worthy of trial than all other remedies hitherto employed, because it has the greatest mass of testimony in its favour, both popular and professional.

It has been a general rule, with physicians in the East, to recommend their patients to apply to the laudanum bottle in all cases where medical aid could not be immediately procured, and this is saying a good deal for the remedy.

In one report with the perusal of which I was favoured, I read, that small phials were placed upon the table after dinner with the wine decanters; and moreover, that they were placed upon posts by the road side, that, should the traveller be seized suddenly, he might resort to this remedy. Such was the opinion entertained of the efficacy of laudanum.

It is needless to enlarge upon all the corroborative evidence, such as may be procured from captains of vessels, who have saved many of their crew by their being acquainted with this medicine, or to quote the testimony of many individuals who have been benefited by its use.

Among physicians, however different their

theories may be as to the nature of the complaints, it seems that all employ this drug in some shape or other, and at some period of the complaint; so that upon the whole it may be said to approach nearer to a specific than any thing with which we are acquainted.

That it relieves spasm more certainly than any other remedy, we have positive evidence; and if Cholera does not immediately depend upon spasm, it is always more or less accompanied by it, so that in the employment of this remedy we are fulfilling a direct indication; and from the practice I have had in this complaint, though it may have been more limited than that of many of my colleagues, I am warranted in saying it has almost answered my expectations.

The following is the practice I have almost universally adopted in cases of Cholera where I have been called in at the commencement. If the patient is robust, the pulse still perceptible, and the system not too much reduced by evacuations, I order from six to eight ounces of blood to be drawn from the arm, the patient being first put to bed, in the recumbent posture.

The following draught is then to be given: Laudanum and æther, of each twenty-five

drops. Strong peppermint water, an ounce and half.

If this be rejected, it should be repeated immediately ; if the second be likewise not retained, then a clyster of linseed tea with fifty drops of laudanum should be administered.

It often happens that the patient after taking the first dose falls asleep, and wakes in perfect health.

A large sinapism to the abdomen, and bottles of hot water to the feet, should not be omitted ; if these means produce speedy relief, an ounce of castor oil should be prescribed as soon as the stomach and bowels are quiet.

Such is the most successful practice in slight cases, and I believe many a severer attack has been prevented by this method of proceeding ; for I had given full directions to many of my patients how to act in case of not immediately finding medical aid, and all the houses I attended were prepared with these draughts.

It may have happened that some have been taken unnecessarily, but I am convinced that many a case has been cut short by immediately applying to this remedy.

It would be well if this always succeeded, but often, after a short respite, the symptoms return, the vomiting continues, accompanied

with spasms of the abdominal muscles and calves of the legs.

In such cases, three grains of bismuth should be given every two hours, and continued till the vomiting has ceased, and the spasmodic action greatly or wholly subsided. The bismuth should then be discontinued, for the symptoms which seemed to demand it have subsided ; and in this sense only I consider it useful, and by no means a specific for the disease. If it be continued for any length of time, it is in many cases followed by congestion of the brain.

If this mode of employing succeeds, as soon as the necessity for continuing it ceases, then the castor oil should be resorted to as in the first-mentioned instance, for this is a *sine quâ non*. When the shock is thus broken, and the patient begins to recover, nothing farther need be done than to keep the bowels open and return to food gradually; beginning by mucilaginous diet, and by degrees adding veal and chicken broth to the meal.

If slight delirium should occur, a few leeches to the temples, and a blister to the back of the neck will generally relieve it.

If the means detailed above did not succeed, I have not myself been able to succeed by any other. I do not mean to assert that these are

the only means I have employed, nor that nothing more is necessary; but they are those upon which I rely the most, and if employed early in the attack will often be attended with success.

Many other symptoms require attention even under this plan of proceeding.

The cramps may often be relieved by friction with the hands, or with some narcotic and stimulating embrocations.

The colicky pains which remain afterwards, and are renewed by every attempt to go to stool, are best relieved by clysters of starch and opium.

Cataplasms of hemlock or henbane applied over the whole surface of the abdomen, and renewed every four hours, are of much service in relieving these after-pains.

The nausea and vomiting are more relieved by the saline effervescing draught than any other remedy. Cold drinks do not seem to be more prejudicial than warm, and when much desired by the patient should be given freely. Lemonade iced has often been taken with advantage, and even the lower orders have drank their quass as usual, and with seeming benefit.

The nitric acid may be given here also with

great benefit as a common drink. Fifty drops of the diluted acid added to a pint of water, sweetened to the taste, is a grateful beverage.

If the stomach remain very tender to the touch, and there is appearance of subsequent inflammation, leeches should be applied, and when they have bled freely, a large cataplasm of narcotic herbs and linseed-meal applied over their bites. In this stage calomel is particularly indicated, and it should be given so as to affect the system; but the patient must be narrowly watched during its use, and when the gums begin to be affected, it should be suspended. Some fatal cases have occurred, where its continuance has been followed by swelling of the parotid gland.

It is better to give it in combination with hyoscyamus than with opium. Three grains of calomel and one of hyoscyamus may be given every three hours, till the effect is produced.

As soon as the mouth becomes affected the inflammation subsides. It is what we see in iritis, where we can witness its effects.

It is here a specific.

It is by no means incompatible with this practice to give anodyne injections to relieve the spasms of the bowels.

As soon as the desired effects are produced

by the employment of the mercury, we must return again to the castor oil, and continue it till the cure is complete.

As long as the motions are of a dark colour and pitchy consistence, it is necessary to purge, for this is a source of irritation ; and, though a consequence only of the disease, may still reproduce it. It is therefore necessary to inspect the motions daily, and by their return to their natural colour we may prognosticate the return to health.

When the pains cease after copious evacuations by castor oil, the cramps subside, and the motions are natural, the remaining debility will gradually disappear as the stomach digests the food which it receives, and which is the best tonic.

Costiveness will often remain for some time, and requires enemas.

It remains to speak of the treatment of the typhus fever and other nervous affections which are both a sequel and a part of the disease itself, but they require nothing peculiar, except that we should be cautious of giving stimulants and antispasmodics too soon ; but I have extended these observations already much beyond my original intention.

Imperfect as they are, I offer them as having

occurred to me during my practice in the present epidemic. They have no pretensions to novelty or originality as far as regards the practice. It is perhaps the oldest extant, but it appears to me the most successful hitherto adopted.

I have introduced the subject of puerperal fever, because I think there are some striking coincidences, and it helps to explain the contradictory opinions in the treatment of Cholera; contradictions which are not new in the history of medicine. The great desideratum is to ascertain the real seat of the disease, whether we are to look for it in the nervous system, or revive the humoral pathology.

If the cause be not evident, let us try to trace the effects and discover the parts of the system upon which it most operates; but this can only be hoped for in repeated and minute dissections.

I now conclude this imperfect sketch in the words of the late Dr. Gooch.

“ If our object is to learn only what has been
“ *said* upon a subject, the pursuit of knowledge
“ is an easy task; but if it is to learn what is
“ *true* on a subject, the pursuit of knowledge is
“ the task of life.”

C A S E S.

No. I.

CASE OF CHOLERA TERMINATING RAPIDLY, AND UNACCOMPANIED BY MANY OF THE MOST USUAL SYMPTOMS.

ADMIRAL ——, aged 56, was observed to go more frequently than usual to the water-closet after dinner on the 29th June. He had been quite well previously, ate his dinner as usual, which consisted of roast veal without vegetables. He took no notice of this looseness, and went to bed at his usual hour. He was moved several times during the night, but without pain or uneasiness. His lady being alarmed sent for me without his consent at six o'clock A.M. of the 30th; as I was absent, another medical man was sent for, who gave him some castor oil and laudanum.

I saw him myself about eleven A.M., and was immediately struck with the change in his countenance; for the Cholera physiognomy was decidedly formed, and that singular expression given to the features which can never be mistaken when once witnessed.

It has not improperly been described as a

countenance which does not belong to the individual himself.

The tongue was rather foul, but moist and still warm, surface cooler than natural; skin slightly corrugated, and of a bluish cast; respiration still free; pulse 68, small and depressed, no tendency to fever. Frequent loose watery motions resembling whey that has not been well strained, but with small pieces of curd floating in it; no pain whatever in passing motions; no colick nor pain about the umbilicus; urine passed freely with motions. No nausea or vomiting.

Upon enquiring whether there were any spasms in the legs or arms, he replied in the negative, but complained of a slight pain in one ankle which was hardly worth noticing. No vertigo or affection of the head, but a faint sensation caused only when he rose from his couch to go to stool, and this not till after several hours from the attack.

A singing noise in the ears complained of from the commencement.

I requested him immediately to go to bed, for he was in his clothes lying upon a sofa. He complied with great reluctance, for there was great moral depression and evident fear of the disease.

I ordered him to continue the medicines that had been prescribed for him, and recommended frictions and hot bottles of water to be applied to the feet, with sinapisms to the stomach.

I returned again at three P.M. The pulse was no longer to be found; the whole body was of a lead colour; the respiration laborious. Asphyxia was evidently produced.

The sensorium was quite free, but the moral depression great; he requested to see a priest, and died at five P.M.

There was no vomiting nor even nausea during the whole course of the disease, neither were there cramps or spasms, except towards the close, when the heart, being no longer able to propel the blood, the intercostal muscles were thrown into spasmodic action.

Fear had operated powerfully upon this patient; he had called upon me repeatedly the preceding week for instructions how to act in case of being attacked. He had made several changes in his diet, and as I learned from his friends his mind had been much occupied for some time with the Cholera; as soon as he believed himself attacked he gave himself up for lost.

No. II.

CASE OF CHOLERA TERMINATING FATALLY IN EIGHT HOURS, AND
IN WHICH THE SYMPTOMS WERE NOT OF A SEVERE CHARACTER.

An old man of sixty, in the service of General ———, applied to me at eight o'clock A.M.; he had been seized two hours previously with slight giddiness and other symptoms of Cholera, had vomited three times, had several loose stools, and complained of cramps in the legs and arms.

The pulse was good, and the animal heat apparently not diminished.

I prescribed the draught and other remedies before mentioned.

Two hours afterwards I saw him again, the pulse was more feeble but distinct, a cold clammy sweat covered the whole body. There was very little anxiety, but the Cholera countenance was formed. He scarcely complained of pain, never uttered a groan, and died at two P.M., retaining his faculties to the last.

No. III.

CASE OF ACUTE CHOLERA WITH TENDENCY TO INFLAMMATION
OF BOWELS, TERMINATING FAVOURABLY.

A young woman of twenty-five was seized about ten P.M. with excruciating pains in the abdomen, recurring at very short intervals and

with increased agony. She had been formerly subject to colick ; but was aware from the first that this was an attack of Cholera, judging from the difference of feeling and intensity of pains.

She ascribed the attack to having eaten some cold beans for supper ; but though convinced of the nature of her complaint was quite devoid of fear.

I saw her an hour after she was seized, she had been four times to stool, the three first motions were solid, the last watery and like whey. She complained of great cold and shivering. There was a peculiar change in the countenance, and some difficulty of articulation. The feet were quite cold, and a clammy sweat was sensible upon the lower extremities, whilst the upper were bedewed with warm perspiration. The breathing was hurried and she was very restless, the pulse very low and weak. She complained of a rushing noise in her ears which almost caused deafness. Urine was passed with each motion. Two table spoonsful of castor oil and fifty drops of laudanum were given immediately ; this was retained about half an hour, and then rejected. Thirty more drops of laudanum were given in a glass of hot brandy and water, a large sinapism was applied

over the abdomen and bottle of hot water to the feet. She soon felt relieved after the second dose, but the spasms still continued. A saline effervescing mixture was given every hour, and every second hour three gains of the subnitrate of bismuth.

The following morning I learnt that the pains had gradually subsided, and that she had slept a little. The cramps were much diminished, the countenance less anxious, voice more natural ; noise in ears still continues ; tongue moist, perspiration general, pulse fuller ; had made water freely ; still a sense of acute pain all over abdomen, much increased by pressure, or by turning in bed or by weight of bed clothes. She had taken four of the bismuth powders, which I ordered to be discontinued.

Twelve leeches applied to the abdomen.

She felt immediate relief from the leeches, and was more comfortable in the evening ; bowels confined, all the other painful symptoms diminished.

Two table spoonsful of castor oil to be given early in the morning.

She passed a restless night, took the oil early ; it had operated twice freely ; the motions dark and fetid, resembling pitch, and passed with considerable pain and tenesmus ; complains

of head being light and spasms in the chest, some fever.

The third day of the complaint the pain in the abdomen continued, increased by motion and pressure, and even by the weight of the bed clothes; no motion, general sensation of cold and shivering, head-ache and vertigo.

Two table spoonsful of castor oil to be given in the morning.

She passed another restless night, and all the symptoms much aggravated; the oil has not operated.

Eighteen leeches ordered to the abdomen, and a solution of Epsom salts in almond milk every two hours.

The leeches again produced immediate relief; the bowels being still confined, a purging clyster was ordered, and a pill composed of three grains of calomel and one of the extract of *hyoscyamus* to be taken every three hours.

She passed a quiet night without much pain; no motion, thirst and nausea, tongue moist, less head-ache. Pulse nearly natural, rather depressed; abdomen still painful on pressure.

Two table spoonsful of castor oil to be taken immediately.

Severe pain after taking oil, which operated several times; each motion produced great

uneasiness, which she described as running all along the bowels, and succeeded by spasms. Sense of bearing down in bladder. Warm anodyne fomentations and cataplasms of hyoscyamus and conium to be applied frequently. Five grains of extract of hyoscyamus to be given at bed time.

She slept well all night; several dark-coloured motions passed with less pain, pulse and heat natural, feels much better; but towards the evening of this, the sixth day, was seized with general rigor and violent pains in all the limbs, succeeded by heat and determination of blood to the head.

Throat and tongue very sore, gums inflamed, maxillary glands much swollen, considerable ptyalism; ordered a lotion for the mouth and a dose of castor oil.

Slept ill from general irritation; seven motions dark and foetid, and passed with much pain; towards evening head and affection of mouth relieved by the purging; some tenesmus, had an anodyne injection, calomel discontinued. Had taken sixteen grains in all. Hyoscyamus continued at bed time. From this time the complaint gradually diminished, the pain of the abdomen subsided, and though she was subject to griping colicky pains, there was no tendency

to inflammation. She continued the anodyne injections and cataplasms; the bowels remained torpid for a long time after, and required castor oil. The appetite and strength returned with the use of tonics.

No. IV.

CASES OF INCIPIENT CHOLERA CURED IN THE FIRST STAGE.

A shop-keeper of sober habits called upon me about eight o'clock, A. M., and informed me he had been seized, about an hour after he rose, with giddiness accompanied by a desire to vomit, and he felt unable to pursue his occupation.

His pulse was full and quick, skin rather warmer than usual, slight twitching pains in the calves of the legs; had three stools of a watery nature and accompanied by pain in the bowels.

Ordered him to lose eight ounces of blood, to go to bed, and take the draught with laudanum and æther.

The following day he was in his shop as usual, and had no return of the complaint.

No. V.

A footman, of rather disorderly habits, came home late at night, and was suddenly attacked

with giddiness, nausea, vomiting, cramps and other symptoms of Cholera. A draught ready prepared was given him immediately; he went to bed and slept soundly all night, and awoke well in the morning.

Some days after he was attacked in a similar manner, and had again recourse to the draught, which relieved the immediate symptoms; he remained unwell for a day or two, and then resumed his occupation.

No. VI.

CASE IN WHICH THE MOST PROMINENT SYMPTOMS OF CHOLERA DID NOT OCCUR TILL THE SECOND DAY OF THE DISEASE.

A young man of thirty-three was admitted into the Sokoloff Hospital about two P.M. He reported himself to have been in perfect health previous to his present attack.

He had been seized about nine A.M. with shivering and vertigo, succeeded by most excruciating pains in the loins. He had no vomiting or diarrhoea, and made water freely.

The extremities were quite cold, there was no pulse at the wrist, the lips were black, and the countenance ghastly. The restlessness of the body was extreme.

He was ordered a warm bath and some castor

oil, and the loins were rubbed with spirit of turpentine and laudanum. Two grains of calomel were given every hour. The following day he was bled from the arm, and leeches were applied to the loins. The pulse became distinct soon after, and vomiting and diarrhœa succeeded.—He died on the fifth day.

What a striking difference this case presents from the description given by *Cullen* of the Cholera Morbus; yet it was a well-marked case of this disease, not to be mistaken by persons conversant with the physiognomy of the present epidemic, and which is not observed in the worst cases of common Cholera; for it is not an emaciation produced by evacuations alone, but is present before the system has been so exhausted as to allow of this supposition. It is the outward and bodily sign of the disease itself.

THE END.